University of Alberta

Parent-child interactive behavior and child social competence

by

Darcy Sunray Fleming

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Education.

Department of Educational Psychology

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The undersigned certify that they have read, and recomend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled **Parent-Child Interactive Behaviour and Child Social Competence** submitted by Darcy Sunray Fleming in partial fulfillment of the requirements for the degree of Master of Education.

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ABSTRACT

The purpose of this investigation was to explore the relationship between the behavior of parents and children engaged in interaction with parent and teacher ratings of child social competence. Participants included 40 families with at risk children between the ages of 3 and 5 enrolled in three different HeadStart programs in the city of Edmonton. Few, if any parent behaviors were related to either parent or teacher ratings of child social competence. A greater number of child behaviors were significantly correlated with teacher ratings of child social competence than parent ratings. There was a significant negative correlation between the frequency and proportion of child initiations and teacher ratings of child social competence. A significant interaction was reported between child and parent initiation behaviors on teacher ratings of child social competence. Discussion and future implications are provided.

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TABLE OF CONTENTS

CHAPTER I **1**

INTRODUCTION 1

Terminology *4*

Social Competence Versus Social Skill 5

Definition of Social Skill 5

Definition of Social Competence 6

CHAPTER II **8**

LITERATURE REVIEW 8

Attachment *8*

Social Learning Perspective *17*

The Resilient Child *24*

Interactionsist Perspective *26*

Nature and role of child effects 27

Goodness or Poorness of Fit 28

CONCLUSION 30

Study Questions *31*

CHAPTER III **33**

METHODS AND PROCEDURES 33

General Research Design *33*

Participants *34*

Parent/Child Interactions *36*

Procedures for Data Collection 36

Reliability 38

Time Sampling 39

Child Social Competence *41*

Validity of Research Project *44*

CHAPTER IV **46**

RESULTS 46

Study Questions *46*

Parent behaviors related to child social competence *47*

Child behaviors related to child social competence *50*

Child Initiations 52

Teacher Ratings 52

Parent Ratings 53

Child Responses 54

Teacher Ratings 54

Parent Ratings 54

Non-engaged behavior of the child 54

Teacher Ratings 54

Parent Ratings 55

Age 55

Gender 55

Interactions *56*

Child initiation/response Profile 59

Gender differences 61

CHAPTER V **62**

DISCUSSION 62

Parent Interactive Behaviors related to child social competence *62*

Teacher Ratings 62

Parent Ratings 62

Child Interactive Behaviors Related to Teacher Measures of Child Social Competence. 63

Teacher Ratings 63

Parent Ratings 65

Interactions 65

Parent Ratings 65

Teacher Ratings 66

Low Initiating Children 67

High Initiating Children 68

Summary 70

REFERENCES **72**

APPENDIX A **78**

ETHICAL APPROVAL AND CONCENT FORMS 78

APPENDIX B **82**

HOME VISITATION 82

APPENDIX C **91**

INTERACTIVE LANGUAGE ASSESSMENT DEVICE 91

LIST OF TABLES

TABLE 1 ..... **48**

PARENT INITIATING BEHAVIORS 48

TABLE 2 ..... **48**

PARENT RESPONSE BEHAVIORS 48

TABLE 3 ..... **49**

PARENT NON-ENGAGED BEHAVIORS 49

TABLE 4 ..... **50**

CHILD INITIATING BEHAVIORS 50

TABLE 5 ..... **51**

CHILD RESPONDING BEHAVIORS 51

TABLE 6 ..... **51**

CHILD NON-ENGAGED BEHAVIORS 51

TABLE 7 ..... **52**

FREQUENCIES OF CHILD INITIATION BEHAVIORS BY RATINGS OF CHILD SOCIAL COMPETENCE 52

TABLE 8 ..... **53**

PROPORTION OF CHILD INITIATION BEHAVIORS BY RATINGS OF CHILD SOCIAL COMPETENCE 53

TABLE 9 ..... **58**

TEACHER RATINGS OF CHILD SOCIAL COMPETENCE FOR HIGH AND LOW INITIATING CHILDREN BY HIGH, MEDIUM, AND LOW INITIATING ADULTS 58

TABLE 10 ..... **59**

TEACHER RATINGS OF CHILD SOCIAL COMPETENCE FOR HIGH AND LOW INITIATING CHILDREN BY HIGH AND LOW RESPONDING CHILDREN 59

TABLE 11 60

FREQUENCIES OF PARENT-CHILD INITIATION GROUPS BY CHILD INITIATING/RESPONDING PROFILE GROUPS 60

LIST OF FIGURES

FIGURE 1 ..... **57**

INTERACTION BETWEEN PARENT AND CHILD INITIATION BEHAVIOR ON TEACHER RATINGS OF THE CHILD'S SOCIAL SKILLS..... 57

CHAPTER I

Introduction

Social competence and skills have immense implications for the functioning of the individual both immediately and over the course of development. Theories such as attachment, social learning, modelling, and others identify parent/child interactions as important contributors to the child's socialisation. The purpose of the present study is to explore the relationships between parent/child interactive behaviors and measures of child social competence. Identifying characteristics of parents and children in interaction that are correlated with child social competence is important in targeting behaviors for both remedial and research purposes. The development of child social competence is a complex process. Rather than a linear sequence of cause and effect, variables in this process act on and interact with each other in order to produce their effect. Thus, the interactions between parent/child communicative behaviors will also be investigated.

The introduction and subsequent prominence of interactionist or ecological approaches to the study of psychology, resulted in the recognition of the importance of the social functioning of the individual in society. The ability to function as a human being is directly tied to our ability to interact with each other. Further, individuals differ in their ability to interact with others. The acquisition or development of these abilities is a difficult and complex process. Problems may, and do occur. The consequences of such problems can be pervasive and devastating.

> One of the few facts that emerges clearly in the beleaguered field of mental health is the extent of poor social skills in psychiatric patients. The studies and surveys show skills problems to be a major component in schizophrenia, mental handicap, depression, social anxiety, addiction disorders, psychopathology, childhood and adolescent problems ... There is evidence, too, that individuals with the poorest social competence have

> the worst prognoses and highest relapse rate, and childhood competence level is predictive of severity of adult psychiatric problems" (Trower, 1984).

Another consequence of poor social competence is peer rejection. Peer relationships within the school setting have a great influence on children's concurrent and later academic, behavioral, and emotional adjustment. Rejected children have been found to be at heightened risk for a number of negative outcomes. These include delinquency and criminality, dropping out of school, or needing mental health services (DeRosier, Kupersmidt, & Patterson, 1994). Rejection by peers has been found to be stable over time and across school and home settings. Rejected children maintain distinctly negative reputations within their peer group; they are seen as nasty, unpleasant children who are actively avoided. Even when rejected children enter new social situations where they are unknown, they are quickly rejected anew (DeRosier et al., 1994).

> If peers contribute substantially to the socialisation of social competence, it follows that low-accepted children might become more vulnerable to later life problems. Specifically, because low-accepted children experience limited opportunities for positive peer interaction, it follows that they would be relatively deprived of opportunities to learn normal, adaptive modes of social conduct and social cognition. Furthermore, because academic pursuit takes place in a social context, poor peer relationships might undermine academic progress as well (Parker & Asher, 1987, p.358).

Social interactions with peers offer many natural learning opportunities for young children. It has been suggested that when deprived of such experiences there may be deleterious effects on children's cognitive, linguistic or communicative development, as

well as on more advanced social interaction skills (Odom, McConnell, and McEvory, 1992).

> Repeated failures to build peer relationships and the absence of appropriate models for establishing productive patterns of social exchange with other children may well damage both social motivation and social skill development (Guralnick, 1986 p.113).

As well as potentially hindering developmental processes, poor peer relationships are stressful experiences for children. They become more vulnerable to various life stressors due to both the experience itself and the accompanying lack of social support.

> It is not surprising to discover that rejected children report significantly greater feelings of loneliness and dissatisfaction than children in other status groups and that popular children engage in, and receive, significantly more positive social exchanges (Landau and Moore, 1991 p.173).

Due to the extreme importance of social acceptance in successful development, it becomes paramount to understand how peer acceptance and rejection come about.

This study attempts to explore the relationship between behaviors observed during parent-child interactions and teacher and parent ratings of child social competence for at risk preschool children. In the remainder of this chapter, the terminology to be used throughout the paper is explicated.

Chapter II goes on to review pertinent literature regarding the role of parents and families in the development of child social competence. Also, there is a discussion of social competence in relation to aspects of resiliency, and its relevance for at risk populations. Finally, the theoretical orientation of this study, the ecological or interactionist model of development, is introduced. This model highlights the importance of both child and family characteristics, as they interact with each other and the environment in the ongoing process

of development. A 'goodness' of fit notion, adapted from the temperament literature is used in discussing the interactions of the child with her/his environment.

Chapter III discusses the methods and procedures of the present study. First, characteristics of the study sample and the criteria for their selection are discussed. Data collection procedures are outlined. The observational instrument used to code child-parent interactive behaviors is introduced as well as evidence concerning its validity and reliability. Next, the instruments used to measure child social competence are introduced and reviewed. Finally, the six research questions are enumerated.

Chapter IV presents the results. First, significant correlations between observed adult interactive behaviors and parent and teacher ratings of child social competence are identified. This section goes on to specify significant correlations between child interactive behaviors and parent and teacher ratings of child social competence. The correlation between parent and teacher ratings is also presented. Finally, the significant interaction between parent and child initiation characteristics is reported.

Chapter V discusses the findings presented in chapter four. The possible implications of and possible reasons for both significant and nonsignificant findings are discussed. It also discusses the implications of the present findings for future research investigating the development of child social competence, and for the field of developmental psychology in general. Limitations of the present study are also discussed.

Terminology

It seems premature to develop rather elaborate treatment strategies for behavioral deficits without knowing at a conceptual level the deficits we are trying to remediate or how to reliably and validly assess these deficits. Investigators in this area have not done an adequate job conceptualising, defining, or providing an assessment technology for

children's social skills. In order to lend both precision and clarity to this discussion, this section will review conceptual definitions of a number of key terms.

Social Competence Versus Social Skill

It is important to distinguish at the outset between social competence and social skills. According to McFall (1982), *social skills* are the specific behaviors that an individual exhibits to perform competently on a task. *Social competence*, on the other hand, represents an evaluative term based on judgements (given certain criteria) that a person has performed a task adequately. Competence does not imply exceptional performance; it only indicates that the performance was adequate. With this distinction clarified, we may now turn to more thorough definitions of these concepts.

Definition of Social Skill

McFall, (1982) identified two general approaches to conceptualising social skill: (1) the *trait model*, which views social skill as an underlying, cross-situational response predisposition; and 2) a *molecular model*, which views social skills as discrete, situation specific behaviors with no reference to an underlying personality characteristic or trait. The trait model approach is not only amorphous and highly abstract, but various measures of the trait of social skill have shown little or no empirical relationship to behavior in naturalistic or simulated situations. Similarly, the molecular model has left several important issues unresolved: (1) the selection of appropriate units of behavior, (2) the classification of social situations (i.e. by physical characteristics of the situation or by the participants in the situation), and (3) the classification and evaluation of outcomes (e.g., short-term vs. long-term consequences, "success" vs. "failure").

A behavioral approach, defines social skills as those situation-specific responses that maximise the probability of maintaining reinforcement, and decrease the probability of punishment contingent on one's social behavior. Social behavior can be exhibited either in appropriate or inappropriate ways. The time when the behavior is exhibited, the frequency

and duration of the behavior, and the intensity of the behavior all clarify the appropriateness of the behavior. Assessed in naturalistic observations, this definition allows antecedents and consequences of particular social behaviors to be identified, specified, and operationalized for assessment and remedial purposes. Unfortunately, whether the social behaviours identified using this definition are in fact socially significant is questionable due to its exclusive focus on immediate reactions to behaviours.

In contrast, according to the social validity definition (Reschly and Gresham, 1981), social skills are those behaviors which, within a given situation, predict important social outcomes for children. These so-called important social outcomes may be: (1) peer acceptance or popularity, (2) significant others' judgements of social skill (e.g., parents, teachers), and/or (3) other social behaviors known to consistently correlate with either 1 or 2.

The advantage of this definition is that it uses naturalistic observations of behavior, sociometric indices, and ratings by significant others to assess and define social skills. Therefore, not only does it specify child behaviors, but also defines these behaviors as social skills based on their relationships to socially important outcomes (i.e. acceptance or rejection). This definition allows flexibility in discussing and assessing social skills and competence as well as provides structure for identifying socially significant behaviors. The disadvantage of this definition is that it clouds the already weak distinction between social skills and social competence.

Definition of Social Competence

Reschly and Gresham (1981) have conceptualised social competence as comprising two components: *adaptive behavior* and *social skills.* Adaptive behavior for children would include independent functioning skills, physical development, language development, and academic competence. Social skills, on the other hand, would include: (1)*interpersonal behaviors* (e.g. accepting authority, conversation skills, co-operative behaviors, play

behaviors), (2) *self-related behaviors* (e.g., expressing feelings, ethical behavior, positive attitude toward self), and (3) *task-related behaviors* (e.g. attending behavior, completing tasks, following directions, independent work).

Social competence is often defined in terms of significant social outcomes. Consequently, according to a peer-acceptance definition, children and adolescents who are accepted by or who are popular with their peers in school and/or community settings are said to be socially competent. This definition is often implicit in research. One of the limitations of using this definition is that it cannot identify what specific behaviors lead to peer acceptance or rejection.

However, in this study we are more interested in examining the relationships between parent-child interactive behaviours and social competence than in identifying discrete social skills. Thus, only measures of social competence are used. The behaviors observed during parent-child interactions are not coded on the basis of social skills but on the basis of significant interactive behaviors. As such, all results and discussion are in terms of social competence as defined above. For our purposes, social competence is best considered a perception of the child in interactions, whereas, social skills are best considered appropriate behaviors within a given context. While competence is directly tied to outcomes of behaviors, skills are the behaviors themselves. By understanding the complex relationships between children's social behaviours and other child, parent and interactive factors, it may be possible to develop important insights into that which defines social competence.

CHAPTER II

Literature Review

Over the past three decades a considerable number of studies have been conducted investigating familial determinants of child social competence. Various theoretical approaches have been adhered to throughout these studies. One approach is based on the assumption that early parent-child attachment relationships form the child's expectations of how others will interact with them. These expectations, in turn, shape the child's behavior in subsequent interactions, and thereby substantially influence the child's level of social competence. Another approach assumes that social skills and competencies are learned through repeated positive and negative social experiences. According to this theory, social learning accounts for the development of child social competence. Parent-child interactions are considered to be of paramount importance since the majority of the child's early social and emotional experiences occur in the context of the family. Finally, ecological or interactionist models have been developed in an attempt to capture the immense complexity involved in the development of child social competence. In the remainder of this chapter research based on these three approaches is reviewed, and implications of their findings is discussed.

Attachment

A prominent area of study regarding the influence of parenting and the consequent development of child social competence is attachment theory. Given that children's early social and emotional experiences occur in the context of the family, it seems reasonable to suggest that the quality of parent-child relationships will play an influential role in the development of children's relations with peers. Peer relationships have often been included as outcome measures in studies of the association between parenting styles, child-rearing

practices, and the development of children's social competence. In fact, studies informed by attachment theory are responsible for some of the most compelling evidence that suggests the quality of children's peer relationships is a reflection of, or at least influenced by, the underlying quality of the parent-child relationship.

According to Cairns (1986), social attachment refers to the intense psychological bond that occurs in infancy, which typically involves the infant's mother. Research demonstrates that this phenomenon has a predictable time-course, and changes over the course of development. As the biological subsystems that give rise to the attachment bond change, so do its manifestations. "One important debate in the current literature concerns the next step: whether the attachment with the mother is somehow transformed to affect peer relations, or whether new relations arise" (Cairns, 1986, p.31).

Individual differences in the quality of parent-child attachment bonds are thought to be associated with social relationships outside the family. The child's interactional history with the parent is said to shape his or her expectations of how others will respond. Many attachment theorists suggest that through the infant-parent relationship, infants develop an orientation to the social world that generalises not only across situations but also across different interactional systems. More specifically, it is hypothesised that children who have formed secure attachments develop a "working model" of the parent as responsive and accessible and of themselves as worthy of love. Thus, these children will be more likely to approach peer interactions with a set of positive expectations and to anticipate positive responses from other children. Analogously, it is hypothesised that children who are insecurely attached will develop a working model of the parent as either rejecting (avoidant group) or as inconsistently responsive (resistant group). Either of these models could have deleterious consequences for children's social relationships with peers. For example, insecure-avoidant children may be primed to anticipate rejection and could be quick to rely on hostile, aggressive interactional styles. Insecure-resistant children may have a model of

others as being unpredictable, which could lead to both hesitant and impulsive behaviors with peers (Cairns, 1986).

In the past three decades, there has been a considerable amount of attention paid to the infant-mother attachment construct in infant research. This work has been greatly facilitated by the demonstration that individual differences in attachment relationships observed at home can also be assessed in brief laboratory separation-reunion procedures. The Ainsworth and Wittig (1969) "strange situation," in particular, has provided a useful and consistent measure and analysis of infant-parent attachment. What is most practical about this approach is that it has become so widely used and accepted that studies investigating attachment using the strange situation are directly comparable and internally consistent.

Waters, Wippman, and Sroufe (1979), undertook two studies to assess the positive affective correlates of secure attachment in infancy and to assess the relation between secure attachment in infancy and social competence in the peer group at age 3.5 years. The two studies are construct validation procedures that study the external correlates and developmental consequences of secure attachment. This type of examination is important for several reasons. First, as a developmental construct, security of attachment can be validated only by confirming predicted external correlates. Second, the theory surrounding the developmental construct can be elaborated and better specified when the range of external correlates is well known. Finally, data on the developmental consequences of such a construct are important for studying continuity of individual adaptation.

The first study tested the hypothesis that a secure attachment relationship would also be associated with positive affective exchanges in the absence of stress. Infants were classified as securely or anxiously attached according to the strange situation procedure. They were then observed prior to separation at 18 months and in free-play situations 6 months later. Three groupings of affective exchanges were measured; discrete behaviors,

behavioral combinations, and ratings of affective sharing. The results indicate that smiling alone significantly distinguished the groups at 18 months. "Showing toys, giving toys, and looking at the mother proved to be multipurpose behaviors and were not consistently associated with expressions of positive affect" (Waters et. al., 1979). Although behavioral combinations were less common than discrete behaviors in both groups, behavioural combinations better distinguished between the attachment groups than any of the discrete behaviors alone. Showing a toy and vocalising, smiling and showing a toy, and smiling, showing, and vocalising combinations significantly differentiated the securely attached group from the anxiously attached group. Finally, ratings of affective sharing also clearly distinguished the attachment groups at both 18 months and 24 months.

The results of Waters', Wippman's and Sroufe's first study demonstrate that in contrast to anxiously attached infants, securely attached infants display patterns of positive affective sharing in the strange situation and during later free play. These results are important in that they emphasise the significance of positive affective sharing over the traditional emphasis on absence of negative signs. It is just as important to identify characteristics that predict positive behavioral outcomes as it is to identify those that predict negative outcomes or pathology. Due to the overwhelming influence of the medical or illness model in contemporary psychological investigations, correction or treatment has often taken precedence over prevention. In fact, a more appropriate focus should highlight parenting skills as important in their own right, not just as means of preventing developmental difficulties.

The goal of their second study was to assess continuity in individual adaptation across the 15 month to 3.5-year interval by relating individual differences in the quality of the infant-mother attachment at 15 months with two dimensions of these same children's competence (peer competence, and ego strength/effectance) at age 3.5 years. The results were consistent with attachment theory. Secure attachment provides children not only with

specific skills, but with an orientation towards others that encourages exploration and adaptability.

Although most studies of attachment are concerned with the three primary attachment groupings (A avoidant, B securely attached, and C resistant), some researchers have endeavoured to investigate differences between subgroups of children in the primary groupings. Easterbrooks and Lamb (1979), for instance, investigated whether different patterns of infant-mother interaction within the securely attached grouping were systematically related to differences in the infant's styles of interacting with peers. Consistent with Ainsworth, Bell, & Stayton (1971), Easterbrooks and Lamb differentiated between 4 subgroups of the securely attached (B) group. These 4 subgroups B_1, B_2, B_3, and B_4, differ in the extent to which activation of the attachment system promotes a shift in the exploration-attachment balance away from exploration and distal interaction toward proximity seeking. The B_1 and B_2 infants, for instance, explore more and rely less on proximal modes of interaction with their mothers than do B_3 and B_4 infants, for whom proximity and contact seeking are heightened.

The results of their investigation supported at least some distinction between subgroups. B_1 and B_2 infants proved to be willing social partners, engaging in more extensive and more competent forms of social behavior with peers than B_3 and B_4 infants. The B_1 and B_2 infants were able to move from their mothers in order to engage in affiliation and exploration in both a peer session and a strange situation. If this type of behaviour carried over to other situations, it would influence the extent to which they engaged in, and benefited from, experiences with novel social partners. The identification of more homogeneous subgroups is an important step in understanding and predicting the effects of particular attachment relationships. Future research should identify parent and child characteristics that predict differences in quality of attachment.

Some researchers (Lieberman 1977) argue that by preschool, young children have had at least some experiences with other children. Further, by providing opportunities for

learning, imitation and social role development, these experiences may make as much or more of a contribution to children's development than parent-child attachment. "Experiences with different individuals may facilitate the growth of social competence by allowing infants to practice intermeshing their social behavior with that of other persons manifesting varying styles of interaction. Infants who remain close to their mothers would have different social experiences" (Easterbrooks and Lamb, 1979, p.386).

Lieberman (1977) compared the influence of adult attachment and previous experience with other children on measures of child social competence. The results of her investigation appear to support the importance of both mother attachment and previous peer experience in predicting measures of child social competence. Secure attachment, for instance, was related to more non-verbal behavior, such as reciprocal interaction, and to negative behavior. Conversely, experience with peers was associated with verbal interactions with peers, such as responsiveness, and number of chains of exchange, which were both explicitly defined in terms of verbal exchanges. Lieberman provides one interpretation of these findings:

> If, as it seems likely, secure attachment fosters confident exploration of the social as well as the physical surroundings, securely attached children may be expected to show a positive orientation to others. This positive orientation may be manifested through non-verbal behaviors such as sharing, giving, and pointing. On the other hand, as suggested by Piaget (1926), socialised speech might be accelerated when children are exposed to peers who are less interested and less experienced than the caregivers in understanding their signals. Children with extensive peer experience may thus more readily use speech as a tool in relating with a peer (Lieberman, 1977, p. 1285).

Lieberman did, however, find a high correlation between peer experience and secure attachment. This finding renders Liberman's previous explanation suspect. Security of attachment, for instance, may play a dual role. First, it may directly promote peer competence by encouraging a positive orientation to others. Secondly, mothers of securely attached infants, may also encourage expanded interactions. More importantly, however, securely attached infants may be better equipped to engage in interactions with peers and benefit from this experience. The developmental sequence is of utmost importance when attempting to infer causality. The fact that mother-child relationships are primary, and initial peer interactions follow, intuitively sets a priority for precursor events. This is especially important when the two relationships are correlated. Lieberman concludes:

> In sum, the present study supports earlier findings on the role of attachment in development. It also extends the scope of previous research by considering the importance of the mother in the pre-school years. Yet it is apparent that peers may exert a simultaneous influence on peer competence. Peers seem to extend the realms of sociability: while the mother may foster readiness for give-and-take, peers may provide role-taking opportunities in which children shift from one role to another and are thus forced to repeatedly change earlier "working models" of self and others (Lieberman, 1977, p1286).

One interesting line of investigation would be to assess whether attachment determines whether or not the child is able to benefit from the opportunities provided by peer interactions. In fact, this is the crux of the debate regarding the development of child social competence. High correlations between security of attachment and amount of experience with peers does not allow one to very easily parcel out their respective influences. Much more work in this area is required.

Although a relationship between infant attachment and child social competencies has been established, little is known about the concurrent association between security of attachment and peer relationships during childhood. "Thus, it is unclear whether the observed relations between security of attachment in infancy and social acceptance by peers in childhood is a function of the quality of the infant-mother relationship or is more accurately a reflection of the current child-mother relationship" (Cohn, 1990, p153). Cohn (1990), investigated the relationship between the mother-child attachment of children at six years of age and the children's concurrent social competence. Techniques for measuring security of attachment in older children have been made available through the work of Main and Cassidy (1987) and their technique was utilised in the current study by Cohn (1990). According to Cohn's (1990) results, insecurely attached boys were less well liked by both peers and teachers, were viewed as more aggressive by peers, and teachers saw them as showing more behavior problems and less social competence when compared to securely attached boys. Current mother-child relationships were, therefore, predictive of peer competence for boys.

A relationship between attachment and child social competence was not demonstrated for girls. It has been well established that boys are more likely than girls to display acting-out problems and to be referred for mental health services. Differences in the types of behavior typically demonstrated by boys and girls, as well as how these behaviors are accepted and responded to by other children are seminal in understanding these results.

Cohn, goes on to suggest that gender differences may reflect a bias in measures of sociometric status. "Observations of naturally occurring play patterns of boys and girls have shown that boys are more likely to play in groups, whereas girls tend to select one or two play partners" (Cohn, 1990, p.160). Because boys may have a larger reference group, sociometric techniques that rely on ratings from all the children in a class may provide a more accurate picture of boy's social relationships. Gender differences are, therefore, very important and should be investigated more carefully.

A primary limitation of research investigating the relation between attachment and later child social competence, is that these researchers have not endeavoured to identify the specific behaviors or qualities of the child, parent, or their interaction that lead to secure, or insecure attachment. Attachment theory as correlated with child social competence is circular. Many of the behaviors that are used to measure security of attachment are intuitively related to behavior associated with social competence. According to Waters et al. (1979) "Avoidance involves looking, turning, pulling, or moving away from or ignoring the caregiver on reunion. Resistance involves mixing clear contact seeking with resistance to contact or an inability to be comforted by the caregiver on reunion. Securely attached infants are active in seeking proximity or interaction upon reunion and are readily settled by such contact" (p. 828). Positive behaviors such as actively seeking proximity or interaction, and being settled by contact are also those that distinguish socially competent children. Therefore, these behaviours should not be the criteria that distinguish between attachment models for a study correlating attachment with child social competence. It is imperative to distinguish child characteristics and behaviors that lead to secure attachment from those that are the product of secure attachment. Without identifying those child, parent and interactive characteristics and behaviors that lead to the development of security in attachment, little is gained from establishing a relationship between attachment and the development of child social competence. Development implies an active and continuous process that cannot be captured or explained through the stagnant labelling of different models of attachment.

The findings of the aforementioned studies go a long way in supporting the theory that early parent-child interactions influence the development of child social skills and subsequent peer acceptance. However, more emphasis and study on the specific parent, child, and interactive characteristics and behaviors related to child social competence is required. Such behavioral specificity is necessary for both remedial and research purposes. Studies of the relationship between attachment and child social competence provides a good

starting point from which to investigate more substantial predictors of child social competence. Recently, considerable effort has been made in investigating more specific behavioral correlates to child social competencies.

Social Learning Perspective

Pettit, Dodge, and Brown (1988), agree that early family experiences have both a direct and an indirect effect on a child's social competence. They hypothesised that social acceptance of the child and his/her sociometric status could be predicted from early family experiences and the social information processing patterns characteristic of these experiences. They further hypothesised that the relation between early family experiences and classroom peer relations would be mediated by the child's patterns of processing social information. According to their results, socially rejected children were found to grow up in less advantageous circumstances, with fewer opportunities for positive interactions with parents and peers, and with physical aggression both endorsed and practised by parents. Further, socially rejected children exhibited deviant patterns of processing social information. The relation between peer and teacher based measures of social competence and early family experience was found to be mediated by the child's social problem solving ability. These findings lend further support to the theory that early family experiences have both a direct and an indirect effect on children's social competence.

Pettit, Harrist, Bates, Dodge (1991), investigate whether qualities of children's interactions with parents lead to predictable variations in children's subsequent social relations with peers. The authors characterise interactions along three dimensions; responsiveness, coerciveness, and intensity. They further address the issue of process by specifying an influence model to help account for cross-setting transfer of "social style". This model is based on social information processing theory and is grounded in the assumption that children acquire a set of social cognitive orientations as a consequence of

their repeated and familiar interactions with parents. These social cognitive orientations then lead to behavioral patterns with peers.

According to Pettit et al. (1991), studies investigating parent-child interactions primarily look at the broad dimensions of "power" and "affect". Power refers primarily to disciplinary techniques, from assertive to more inductive forms. The affective dimension characterises interactions ranging from primarily affectively positive to excessively critical or negative interactions. According to this framework, parents can differ in "responsiveness", "consistency", and "predictability". Pettit et al. (1991), stress the importance of providing a responsive environment since this has been hypothesised to provide children with a sense of control and efficacy with respect to social relationships. This sense of control, in turn, facilitates the development of socially appropriate interpersonal styles. This is consistent with studies on attachment.

Pettit et al. (1991), however, go further than most attachment theorists in discussing the relationship between parental proactive control and children's social adjustment. This parental involvement is characterised by careful monitoring of the child's behavior as well as anticipatory guidance. It requires accurate reading of child cues and the willingness to act rather than react, to create an appropriate social experience for the child.

Pettit et al. (1991) stress the importance of children's cognitive appraisals of social situations, and suggest that children's social cognitive skills mediate the link between early family experiences and later social behavior with peers. "Socially competent children are more likely to believe that prosocial and assertive behavior will be relatively easy to perform and likely to lead to positive outcomes, whereas socially aggressive children are more likely to have the same kinds of beliefs about aggressive behavior" (Pettit et al., 1991, p. 386). The authors go on to say that children whose non-aversive behaviors have been responded to positively and contingently may be especially likely to view themselves as capable of performing socially competent behaviors, and that these kinds of cognitive

appraisals would be more common among children reared by parents who are positively responsive and/or proactively involved.

Of particular interest in their study, Pettit et al. (1991) developed their own interaction coding scheme, the Social Event Coding System (SEC). The SEC focuses on four types of events: (a) control events, defined as explicit influence attempts directed from one individual to another (i.e., mom attempts to alter the behavior of the child, or vice-versa); (b) teaching events, which were limited to extended and intentional didactic exchanges; (c) social contact events, which were represented by non-manipulative social play and conversation (e.g. mother initiates discussion with her child); and (d) reflective listening events, where parental responsiveness to child cues is present, but no effort is made to redirect or modify ongoing child behavior. Each event was further coded according to specific descriptive aspects of the interaction (i.e., participants, initiating circumstances, effectiveness, quality, and outcome).

According to their results, maternal responsiveness predicted high levels of teacher-rated child social competence. Further, affectively negative matching (parent-child coercion) predicted relatively high levels of teacher-rated aggression with peers. Reduction in unpredictability appeared to offer greater stimulus control of children's reactive aggression than either direct positive (parental compliance) or negative reinforcement. According to Pettit et al. (1991) these results suggest that the link between family interaction and subsequent social behavior may be mediated by children's social cognitions. The findings of an association between responsiveness and children's competent behavior may be explained in terms of Modelling (Parke, MacDonald, Beitel, & Bhavnagri 1988), Positive Mood Induction , or Positive Expectations for Social Interaction (Sroufe 1983).

> Children whose parents engage them in positive and contingent ways may learn to get along with peers because they anticipate that such experiences will be enjoyable and they clearly communicate this expectation to their play partners, they empathise with and respond contingently to their peers, and

> they allow peers to be active in determining play activities and roles. (Pettit et. al, 1991, p.400).

Dekovic' and Janssens (1992) examined relationships between parent's childrearing style, the child's prosocial behavior, and the child's sociometric status. Prosocial behavior of the child was primary in this analysis as a mediator between parental childrearing and the child's sociometric status. Prosocial behavior was defined as "behaviors that are positively responsive to others' needs and welfare" (Dekovic & Janssens, 1992, p. 925). According to the authors, there are three primary reasons to focus on prosocial rather than negative behaviors. First, prosocial behavior is the behavioral factor most consistently correlated with successful peer relationships in all age groups. Second, findings suggest that children's selection of liked and disliked peers depends more on perceived positive qualities than on perceived negative qualities. Third, virtually all of the explanations of prosocial behavior have assumed that it is learned or socialised behavior.

Dekovic' & Janssens (1992) consider situations where the child requires help particularly salient in the development of prosocial behavior and for interactions with peers that involve helping behavior. The authors, therefore, observed the children and their parents performing a task that was too difficult for the child to perform alone. Such situations were thought to provide excellent opportunities to observe parental controlling behavior since the tasks were potentially frustrating to the child. Since patterns of parental behavior, rather than separate dimensions, are thought to be more predictive of child behavior, more broadly conceptualised patterns (authoritative/democratic and authoritarian/restrictive) were used to characterise the parents' behavior.

One of the principal strengths of Dekovic' & Janssens' (1992) study lies in their analytic procedure. Three competing modes of the relationship between parent's child-rearing style, the child's prosocial behavior, and the child's sociometric status were tested.

> In the first model the child's prosocial behavior is seen as a true mediator, that is, as a necessary component of that relationship. In the second model, prosocial behavior is a potent mediator; however, it is only part of the explanation of the relationship between child rearing and sociometric status. Finally, in the third model, prosocial behavior is not a mediator; after eliminating the effects of child rearing, prosocial behavior has no effect on sociometric status. Because of evidence indicating that differential patterns of maternal and paternal behavior are associated with their children's social competence (MacDonald, 1987; MacDonald & Parke, 1984; Parke et al, 1989), these models were tested separately for each parent (Dekovic' & Janssens, 1992, p.926).

The overall analysis of parental behavior indicated that the parents of popular children are more likely to adopt an authoritative/democratic style when interacting with their children. Parents of rejected children, on the other hand, tend to endorse an authoritarian/restrictive style. Authoritative/democratic style of parenting was characterised by the use of indirect and persuasive verbal strategies such as suggestions and explanations and by providing more support, encouragement, and positive reinforcement. "They seem to be more sensitive to the child's signals and more involved with their child" (Dekovic' & Janssens, 1992, p.930). Authoritative/restrictive parents tend to display fewer positive emotions in response to their child and were more likely to criticise their child's personal functioning and task behavior, without providing information as to why something was wrong and how it should be done. "When trying to influence the child's behavior, they rely on direct commands, prohibitions, and physical take-overs, doing the task for their children rather than aiding the child to discover their own solutions" (Dekovic' & Janssens, 1992, p.930).

Parent child-rearing style was linked not only to the child's sociometric status, but also to the child's social behavior in a peer group. According to their results, democratic child rearing and a positive affectionate relationship seemed to foster the child's prosocial development. These findings are supportive of the second model being tested, that is, that child rearing will have both direct and indirect effects on the child's sociometric status. According to this model, prosocial behavior should partially mediate the relationship between child rearing and sociometric status.

A very comprehensive study investigating the relationship between maternal behavior and children's sociometric status was conducted by Putallaz (1987). The primary purpose of the study was to explore the potential link between the social behavior of mothers and the social behavior and sociometric status of their children. Her results support a direct relationship between parent behaviors and their child's sociometric status. "Mothers of higher status children appeared to be more positive and focused on feelings and less disagreeable and demanding when interacting with their children than mothers of lower status children" (Putallaz, 1987,p336). Further, her results support a direct relationship between parental behavior and child behavior. That is, the behaviors mothers exhibited with their children was highly related to the manner in which their children acted, both with them and with an unfamiliar age-mate. The results of Putallaz' (1987) study are consistent with a model suggesting that children may acquire at least some of their social behavior repertoire through interactions with their mothers, which in turn may influence their sociometric status.

Fundamental to any discussion of the relationship between family and child factors is a statement regarding the direction or nature of this relationship. It is often assumed, for instance, that family factors such as attachment, parenting style, and family environment have a causal effect on child variables such as affect, and social competence. Few studies, however, attempt to investigate the nature of the relationship. It may be the case, in fact,

that child variables such as temperament, bring about certain types of parenting styles, and determine the quality of attachment.

Several findings from the research of Martha Putallaz (1987) suggest that at least some of the causal direction may be from maternal to child behavior. First, some of the behaviors mothers exhibited when interacting with other mothers were related to the social status of their children. (It is unlikely that children were influencing their mother's behavior sufficiently so that it would generalise to their interactional style with another adult). In addition, it would appear that first-grade children have been interacting with peers for a sufficiently short period of time that at least some of their behavioral repertoire probably still would be influenced by their mothers.

Putallaz (1987) offers three important suggestions for future research. First, she encourages longitudinal studies mapping the development of children's social behavior from early childhood. Second, research should study the interactions of mothers with children other than their own. Finally, intervention research should be conducted in which maternal behavior is modified and subsequent child behavior is assessed. It is inappropriate for studies to presuppose the direction of influence. It is likely the case that the relationship is bi-directional and both parent and child variables have a determining influence on the nature and quality of their interactions. Much would be learned in teasing out the magnitude and direction of their probable effects.

Many researchers have investigated the effects of the quality of child care institutions on child development. Higher quality institutions have been related to greater competence on a number of child characteristics. Aspects such as class size, teacher to child ratio, and quality of caregiver-child interactions, are all aspects of the child care setting that have been hypothesised to have a direct effect on the acquisition and development of child competence.

Holloway and Reichart-Erickson (1989), examined the relationship of preschool children's social competence to child care quality, family structure, and mothers'

expectations regarding the development of social and cognitive skills. Their results suggest that socially competent children attend programs with smaller classes and higher quality caregiver-child interactions. It was also observed, however, that mothers who expected early acquisition of developmental skills, and those of higher socio-economic status, tended to place their children in higher quality child-care settings. After controlling on home variables, group-size and caregiver-child interaction contributed independently to children's social competence. Also, maternal expectations and birth order contributed to children's social competence after controlling on child care variables. An interaction for prosocial reasoning was found between the two settings: high quality caregiver-child interactions were positively related to prosocial reasoning primarily for children whose mothers held early expectations (Holloway & Erickson, 1989, p. 297).

According to Holloway and Erickson (1989), expectations may serve as internal guidelines for parents' behavior. A parent who expects early development of social skills may be more likely to facilitate and reward a child's interaction with peers. Howes and Stewart (1987), for instance, found that more nurturing and socially supportive families used high-quality child care, while restrictive and stressed families used lower-quality child care. The authors conclude, that in spite of correlations between the characteristics of home and school, the effects of these two settings tend to build on each other, with each setting contributing independently to the socialisation of social relations (Holloway & Erickson, 1989).

The Resilient Child

The common prediction that in early childhood stressful experience is fated to lead to a vulnerable and unfavourable life course has been challenged by various authors (see for example, Clarke and Clarke, 1976). Their thesis has been confirmed in the dramatic finding in Werner and Smith's large scale longitudinal study in Kauai, Hawaii. "In this

cohort of 698, 204 children developed severe behavior or learning problems at *some time* during the first two decades of their lives... Yet there were others, also *vulnerable* - exposed to poverty, biological risks, and family instability, and reared by parents with little education or serious mental health problems - who remained *invincible* and developed into competent and autonomous young adults who 'worked well, played well, loved well and expected well'" (Werner and Smith, 1982, p.2-3).

There has been increasing theoretical acceptance in the child development field of the transactional-ecological model of human development in which the human personality is viewed as a self-righting mechanism that is engaged in active, ongoing adaptation to its environment (Bronfenbrenner, 1974). This acceptance has resulted in a growing research interest in moving beyond the identification of risk factors for the development of a problem behavior to an examination of "protective factors", those "traits, conditions, situations, and episodes, that appear to alter- or even reverse- predictions of negative outcome and enable individuals to circumvent life stressors" (Segal, 1986; Garmezy, 1991).

> The importance of this research to the prevention field is obvious: If we can determine the personal and environmental sources of social competence and wellness, we can better plan preventive interventions focused on creating and enhancing the personal and environmental attributes that serve as the key to healthy development. According to this perspective, personality and individual outcomes are the result of a transactional process with one's environment (Bernard, 1995, p.7).

Social competence is one of the most frequently identified attributes of resilient children. It usually includes the qualities of responsiveness, flexibility, empathy and caring, communication skills, a sense of humour, and other prosocial behaviors. Consequently, resilient children--from early childhood on--tend to establish positive relationships with others, including friendships with their peers. In view of the importance

of social competence to the development of resiliency. Discovering the predictors of child social competence in a high risk sample is of incredible importance.

Interactionsist Perspective

The socialisation process is not simply one of all-powerful adults moulding passive children into any shape they choose. As has become clear over the last 30 years or so, this process is a much more complex undertaking in which multiple influences interact in multiple ways at various points of an individual's developmental path. From birth, children are embedded in a network of social relationships involving a diversity of individuals, each of whom has to be recognised as potentially influencing the course of the child's development.

According to the work of Parke (1981), for instance, fathers tend to be just as responsive to their children's signals as mothers. Although they may typically differ from mothers in their interaction styles by being more vigorous and physical, there is no indication that they are less competent as caregivers.

> The notion that women, by virtue of their biological make-up, are inevitably better prepared for parenting than men has had to be re-examined; whatever sex differences do exist in parental competence can probably be better explained by social convention than innate endowment, as seen in studies of men who have assumed the role of primary caretaker in the family (Schaffer in Tizard & Varma, 1992, p.41-42).

Siblings have also come to be recognised as potentially important sources of influence (Dunn & Kendrick, 1982). The influence is, in the first place, an indirect one: the very fact that there are two (or more) children to be cared for by the parents transforms the relationship between parent and any one child. This point is particularly well illustrated by

studies of twins whose opportunities for one-to-one interaction with the mother tend to be sharply reduced because of the mother's need to distribute her attention among both children; this sometimes has a marked impact on development. The direct effects stem from the great opportunities siblings have to acquire, through their mutual interaction, an understanding of their social world and the rules which regulate that world.

As Hartup (1983) has shown, there is a great deal of evidence indicating that peer interaction can be a powerful means of exerting socialising pressure at all stages of development beyond infancy. Indeed the list of potential socialising agents is continuing to grow: grandparents (Tinsley and Parke, 1984), daycare staff (Hess, Price, Dickson, & Conroy, 1980), and individuals such as neighbours comprising social support systems outside the family (Crittenden, 1985). In recent years, even inanimate sources such as television (Singer and Singer, 1983) have attracted the attention of researchers who have argued that they too need to be taken into account if one is to understand the final product.

Nature and role of child effects

> The multiplicity of socialising agents, plus the multiple settings to which they expose children, plus the highly intricate interactions among different agents and settings--all this adds up to a far more complex view of socialisation that we now need to adopt. But over and above there is one other set of influences that we must also take into account, namely, influences stemming from the child (Schaffer in Tizard & Varma, 1992, p.45-46).

The notion of child effects is now widely accepted and the implications for the reciprocal nature of social interactions involving even the very youngest infant are generally recognised. In practice, however, the nature of child effects has mostly been treated in

somewhat crude terms (i.e., age differences, pathology status, etc.). Only the attempts to isolate temperamental characteristics constitute a more refined approach to this problem (Schaffer, in Tizard & Varma, 1992, p. 46).

Goodness or Poorness of Fit

Many elements help to shape the child's development in a positive or negative direction, including: special abilities or handicaps, the nature of the family, a favourable or unfavourable socio-economic environment, a stimulating or degrading school setting. Among these many factors, a goodness or poorness of fit between the child and her environment is often of major importance. This concept of goodness or poorness of fit as formulated by Chess and Thomas (1984, 1990) provides a model for the interaction of offspring and parents.

> Briefly defined, goodness of fit exists when the demands and expectations of the parents and other people important to the child's life are compatible with the child's temperament, abilities, and other characteristics. With such a fit, healthy development and resiliency can be expected. Poorness of fit, on the other hand, exists when demands and expectations are excessive and not compatible with the child's temperament, abilities, and other characteristics. With such a fit, the child is likely to experience excessive stress and vulnerability, and healthy development is jeopardised (Chess & Thomas, in Tizard & Varma, 1992, p.73).

Parents and families differ in their childrearing practices and attitudes. Some parents are permissive with regard to manners and social niceties; others have strict standards in this regard. Some parents may express affection openly; others are reserved. One type spends a great deal of time with their children in activities of joint interest; others are less

involved. Some parents and children confide easily in each other on intimate personal issues; others do little of this kind of communication. There are parents who lay stress on the child's early socialisation of various functions; others are less strict and demanding with respect to these achievements.

Children are also different. Whether younger or older, children have individual differences in their talents and abilities, in their interests and goals, and in their behavioral style or temperament.

According to Chess and Thomas (1992), it is this phenomenon of individual differences in children and in parents that can produce a goodness or poorness of fit. For example, one might find a professional family who expect their perfectly normal child with average intellectual endowment to achieve superior academic performance. Excessive stress and poorness of fit results in deleterious results on the child's development.

Goodness of fit does not imply an absence of stress and conflict. According to Chess and Thomas, these are inevitable concomitants of the developmental process, in which new expectations and demands for change and progressively higher levels of functioning occur continuously as the child grows older. Demands, stresses, and conflicts, when in keeping with the person's developmental potentials and capacities for mastery, may be constructive in their consequences and should not be considered an inevitable cause of behavioral disturbance. The issue involved in disturbed behavioral functioning is, instead, one of *excessive* stress resulting from poorness of fit between environmental expectations and demands and the capacities of the individual at a particular level of development.

According to Chess and Thomas (1991), goodness of fit does not depend on a similarity of temperament between parent and child, or between teacher and child. "As we have analysed the interactions between parents and their children we have found all kinds of combinations. In some cases, similarity of temperament promoted a goodness of fit; in others it led to a poorness of fit" (Chess & Thomas, in Strelau & Angleitner, 1991, p.25).

It is the person-specific characteristics of the parents and children situated within a very specific environment that account for the goodness and poorness of fit. According to the authors, this fit should not be generalised beyond the individuals in question within their normal environment.

What becomes evident in the discussion of goodness or poorness of fit, is its usefulness in discussing human interactions. It is flexible enough to capture the complex and dynamic nature of interactions while avoiding either dogma or blame. According to this approach, there is no one right way to behave or interact. Both the people involved and the context are important in determining the quality and consequences of the interaction.

Conclusion

The notion that children's individuality is to be explained primarily by the rearing practices of parents, particularly during early and so-called formative years, dominated the thinking of developmental psychologists for a long time. However, an increasing body of research has shown that such a conception is simplistic and in need of drastic revision. First, there is a far greater diversity of individuals and agencies potentially available as socialising agents than previously thought. Second, these agents do not influence the child in a simple additive fashion but impinge jointly in complex interactions in various contexts. Finally, it is essential that one takes into account influences stemming from the child's own individuality. A far more complex view of the socialisation process must therefore be adopted: developmental change is not simply a function of parental input, nor is it necessarily shaped decisively by the earliest experiences encountered by the child.

Over the past three decades a considerable amount of research has been done in an attempt to tease out the predictors of child social competence. However, virtually all studies have presupposed a unidirectional, parent-to-child relationship. This has been done in an attempt to limit the overwhelming amount of complex information. More comprehensive

theories need to be developed which can account for both child, parent and environmental factors.

In the present study characteristics of parents and children engaged in interactions will be explored. Consistent with the literature just presented, it is hypothesised that aspects of the parent child interaction will be related to measures of child social competence. It is further hypothesised that characteristics of the participants will interact, which is consistent with the complex nature of child development.

Although this study is exploratory, and relies on investigating relationships and group differences, it has as its premise, the implicit assumption that the interactions between parents and children are important socialising agents. Causal conclusions cannot and should not be generated from relational data, therefore, all discussion will refrain from inferring directionality or priority. However, it will be useful in identifying characteristics of parents, children, and their interactions that should be the focus of longitudinal investigations using inferential statistics in order to discover their effects, if any, on the development of child social competence.

Study Questions

This investigation attempts to explore the relationship between characteristics of parent/ child interactions and parent and teacher measures of the child's social competence. Several specific research questions will, therefore, be addressed.

1. What behaviors or characteristics of the parent during parent-child interactions are related to teacher ratings of child social competence?

2. What behaviors or characteristics of the parent during parent-child interactions are related to parent ratings of child social competence?

3. What behaviors or characteristics of the child during child-parent interactions are related to teacher ratings of child social competence?

4. What behaviors or characteristics of the child during child-parent interactions are related to parent ratings of child social competence?

5. Is there an interaction between the effects of parent and child engaged behavior on teacher ratings of child social competence?

6. Is there an interaction between the effects of parent and child engaged behavior on teacher ratings of child social competence?

CHAPTER III

Methods and Procedures

The primary purpose of this research is to explore the relationships between parent-child interactions and teacher ratings of child social competence. Parent-child interactive behaviours were observed and coded. Subjects were grouped according to differences in both the quality and quantity of their interactions. This information was then analysed statistically in order to discover possible independent or interactive effects on teacher ratings of child social competence.

General Research Design

This investigation is a quasi-experimental study. It is a one time observational study in which families are asked to play with toys that were provided by the research team. All interactions were videotaped in the families' homes. "A primary purpose of quantitative observational research is to generate information relevant to describing and identifying adaptive functions in the course of everyday person-environment transactions" (Sackett, 1978, p.5). Observational studies provide objective, descriptive information regarding the natural behavior of the target population. This design is intended not only to explore relationships, but observational methods both generate hypotheses fundamental to further experimental analysis and suggest types of interventions.

The primary advantage of an observational study in a natural setting is that it is a familiar environment for the participants. This enables the observer to record and later examine spontaneous behaviors from the participants, rather than observing the participants in an environment that is deliberately structured toward obtaining certain responses. However, the main disadvantage of naturalistic observation is the need to define distinct behavioral categories. This task is difficult in research dealing with social interactions where there are rarely discrete beginnings and endings.

Participants

Participants in the present study were selected from families in an ongoing research project, The Child and Family Resiliency Project. Participants consist of families with children aged 3-4 years who have been identified as meeting the criteria for inclusion in a Head Start program. According to the Student Admission Policy, there are four criteria which children must meet to enter a Head Start program in Edmonton:

I. Age of Child

The child must be at least 3 years 6 months by September 1st of the program year, and not older than 5 years 6 months by September 1.

II. Grant Eligibility (Level of Need/Delay):

A. Alberta Education

The child must meet the criteria for Special Needs Funding (mild-moderate disability, specifically emotional/behavioral disability, learning disability or speech and language impairment) or for Program Unit Funding (severe disability, specifically emotional/behavioral disability), as outlined in the Alberta Education Manual for Special Needs Funding. Refer to Appendix A for a complete listing of the eligibility requirements for both Special Needs Funding, and Program Unit Funding.

B. Brighter Futures (Health Canada)

Health Canada defines the priority target group as at-risk pre-school children, including the following:

1) children in low-income families

2) off-reserve aboriginal children, and other minority children determined to be at risk

3) children of young parents and/or lone parents

4) children living in families with a combination of risk factors

Situations which may place children at higher risk include:

* family poverty and/or homelessness
* youth or inexperience of parents
* abuse or neglect
* poor health or poor nutrition including low birth weight
* substance abuse by parents
* family breakdown
* lack of access to medical, social, mental health, early educational, or respite services
* lack of community support for families
* chronically mentally ill parents.

III. Income Level of Family

The Income Guidelines are based on the Low-Income Cut-Offs set by Statistics Canada (dated February 9, 1996). These figures are gross annual income. Family Size includes total number of adults and children.

Family Size	Income Cut-Off
2	$21,092
3	$26,232
4	$31,753
5	$35,494
6	$39,236
7	$42,978

IV. Parental Involvement

One parent/guardian for each child must be available and willing to attend parent group, or agree to an alternate form of parent involvement, e.g. visits to the children's classroom.

Finally, in addition to qualifying for the Head Start program, children selected for inclusion in the present study exhibited mild to moderate delays in two or more developmental domains on the McCarthy Scale of Children's Abilities. A minimum of 12 children and their families were selected from each of 3 Head Start centres in the Edmonton area. Forty children and their families were included in the present study. Consent forms and Ethical approval forms are presented in Appendix A.

Due to limitations in our capacity to assess the abilities and social interactions of children who use a first language other than English, only families where English was spoken as a first language were included in the present study.

Parent/Child Interactions

Procedures for Data Collection

Parent-child interactions were videotaped during two 15 minute episodes of play in the family's home. Families were randomly assigned to one of three data collectors. Each data collector was trained in conducting the data collection procedure, as well as on proper use and maintenance of the video cameras. (See Appendix B for a protocol for home visits.) Data collectors made appointments with the families by phoning them in advance, or, in cases where the family did not have a phone, they arranged the session in person. The script for the initial phone contact is presented in Appendix B. Upon arrival at the family's home, demographic information was collected and the purpose of the session was explained. The video camera was then set up and play instructions were given. A copy of the play instructions are provided in Appendix B. The family's interactions while playing with toys provided by the data collector were then videotaped for 15 consecutive minutes. After 15 minutes, the data collectors stopped the recording and informed the family that the 15 minutes were up and that recording had stopped. Families were then asked to problem solve a scenario or situation identified by the data collector. A copy of the problem situation and instructions are presented in Appendix B. The family was videotaped discussing the

situation. When they had finished, the camera was turned off, the family was thanked for participating, and the second visit was arranged if necessary.

From each video tape, one random three minute section was analysed using the Interactive Language Assessment device adapted from Hemmeter and Kaiser (personal communication, July 1995). This instrument is a continuous-observation system in which each parent and child behavior is coded while watching the videotape of the session. Behaviors were coded into three primary types: (1) initiations, (2) responses, and (3) non-engaged behaviors for both parents and children. (A list of the coded behaviors and a copy of the coding form are provided in Appendix C.) The original Instrument by Hemmeter and Kaiser was not used because it was too long and complicated. Further, many of the behaviors in the original device were not relevant to the present study. Behaviors that were deemed superfluous, and those that occurred too infrequently to be interpreted were dropped from the original Coding form.

Parent initiations were broken down into five sub-types: (1) instructions, (2) questions, (3) recruiting child's attention, (4) prompts, and (5) time delays. Parent responses were also broken down into eight sub-types: (1) repeating, (2) mirroring, (3) expansion, (4) seeking clarification, (5) acknowledge/praise, (6) following the child's lead, (7) unintelligible feedback, and (8) negative feedback. Non-interactive behaviors of the parents were of grouped according to three sub-types: (1) unintelligible remarks, (2) comments, and (3) no-response. (For operational definitions of these terms, please refer to Appendix C.)

Child Initiations were broken down into three sub-types: (1) verbal requests, (2) non-verbal requests, and (3) questions. Child responses grouped according to five sub-types; (1) obligatory correct response, (2) related but incorrect response, (3) unrelated response, (4) unintelligible response, and (5) imitation. Finally, four sub-types of non-engaged behavior were coded from the child's interactions: (1) unintelligible remarks, (2)

comments, (3) non-verbal behavior, and (4) loss of interest. (Operational definitions of these sub-types are provided in Appendix C.)

Frequencies were calculated for both primary and sub-typed behaviors. The frequencies were then recoded as percentages of either adult or child behaviors. Frequency scores were used as a measure of level of engagement or interaction while percentile scores were used as a measure of style or quality of interaction.

Reliability

The use of human observers necessitates the need to measure the consistency of recording (Wall, 1981). In observational studies, as Strain, Cooke, and Apolloni (1976) note, "the only feasible test of reliability is interobserver agreement" (p.80). This refers to the percentage agreement score obtained between two observers who independently record the same behavior of a subject. It reflects the extent to which two or more observers agree on scoring behavior. If the observers consistently demonstrate high agreement scores, it can be generally assumed that the observations accurately reflect the subject's performance (Kazdin, 1977). The basic objective is an estimate of the consistency of measurement. In similar studies, a criterion of 80% agreement has been considered satisfactory (Hartmann, 1977; Sulzer-Azaroff & Mayer, 1977). This criterion was used in the present study.

Reliability rests on the precise operationalization of behavior, and on the careful training and supervision of the observers. According to Wall (1981), a definition of behavior must meet three basic criteria: objectivity, clarity and completeness. Hence, the degree of observer agreement is dependent on a number of factors which include: specification of definitions of the observation code, complexity of coding instrument, observer coding, method of calculating reliability, and frequency of time sampling (Marsh & McElwee, 1974).

Calculating coefficients of agreements was the method employed for estimating reliability (Sulzer-Azaroff & Mayer, 1977). The following formula was utilised: (Number of Agreements / Number of disagreements + Number of Agreements) * 100. Agreement was scored when both observers coded a behaviour the same, and disagreement was scored when the two observers differed in their categorisation of a behavior. No score was given when a non-engaged behavior was identified by only one observer. Obviously, the value of this percentage agreement statistic depends on the rate of behavior obtained. The higher the occurrence of a behavior, the more accurate is the percentage agreement. With low frequency behaviors, one disagreement can artificially decrease the overall score. Therefore, behaviors deemed superfluous or that occurred too infrequently to be interpreted were dropped from the original Coding form.

Reliability was established prior to coding the data. The process involved both coders and the principal investigator viewing and reviewing segments of tape and discussing appropriate codes. Once both coders were successfully trained in using the instrument and felt confident, they began to view and practise coding independently. Coding of study data did not begin until the two coders received a minimum of 80% agreement on three successive 30 second segments on three different videotapes. A comparison of the coded data sheets was made on a point-by-point basis. Reliability was reassessed approximately every four days. (Dates and percent agreement scores are reported in Appendix C.) Again reliability was relatively consistent and on average was better than 80% during this continual evaluation of reliability.

Time Sampling

According to Sackett (1978), "[t]he empirical goal of observational research is to gather samples of behavior that are representative of subjects' actual response repertoires" (p.5). Time sampling facilitates the categorisation and description of behavior. In most of the published studies using observations as the primary methodology, time sampling

strategies have been used. These strategies typically involve recording the occurrence of predefined behaviors along a pre-set time dimension:

> A common unit for recording observations of ongoing behavior in naturalistic settings is a simple tally of the occurrence of pre-selected categories of behavior. Typically, an arbitrary partitioning of the time dimension is used to provide a frame of reference within which the behavioral observation can be recorded. (Jones, 1973, p.120)

Time units in observational studies have varied from a fraction of a second to five minute intervals. This study used two three minute intervals, one from each of two separate occasions. Continuous three minute segments were coded. The two segments were averaged. During a three minute segment, the average number of both parent and child behaviors was 53.84. Thus, three minutes was deemed long enough to sample a reasonable variety and quantity of parent and child behaviors.

The Interactive Language Assessment device uses a frequency, or event, recording system. Every behavior for which there is a code is recorded every time it occurs. Event recording is relatively straightforward and is often used by clinical researchers. Event recording, however, has several limitations. These include: (1) the time at which behaviors occur is not recorded, thus sequences or temporal patterns cannot be determined from observer records; (2) due to the difficulty in discriminating the initiation and termination of discrete behaviors, reliability is difficult to achieve; (3) when low interrater reliability occurs, it is difficult to determine which occurrence of the behavior caused the disagreement; and (4) observers can end up with the same frequencies although they recorded different behaviors during the observation. Although interval recording with short intervals is better for a more thorough analysis of the data, it is both more cumbersome and is inefficient for collecting data on low frequency behavior or for behaviours that last for long periods of time. In spite of these limitations, the use of total frequency behaviors

during the 3-minute interaction does seem to be appropriate for both visual and statistical analysis. According to Hartman (1977) behavioural events are appropriate units for assessment of reliability.

Child Social Competence

Teachers at the HeadStart centres who were familiar with a particular child for at least 8 weeks, were asked to fill out the Preschool Behavior Rating Scale (PBRS) (Barker & Doeff, 1980). The PBRS is a rating scale used by teachers. It measures, from a developmental point of view, children's preschool behavioral skills in the psychomotor, cognitive, and social areas. The PBRS is intended specifically for children from 3 to 6 years old who are enrolled in day care, Head Start, or regular nursery settings. The PBRS provides useful information about children's preschool behavioral skills and indicates whether they are typical, questionable, or atypical. It provides a total raw score, three factor scores, and component scores in five areas. Norms are based on a cross-sectional sample of 1367 children. The sample included male and female children of low and high socio-economic status (SES), black and white racial groups, and ages ranging from 36 to 71 months. Statistical analysis showed that PBRS scores differed significantly only by age and sex.

Pearson product-moment correlations have been computed for interrater, split-half, and alternate forms reliability. Interrater reliability showed that independent ratings of children by pairs of teachers correlated highly (generally > .80) for the PBRS total, three factor groupings, and five subscore groupings. This high level of agreement between independent ratings increases the likelihood that the instrument provides reasonably accurate measures of the behaviors surveyed. Split-half and alternate forms reliability for the PBRS total were reported in the manual as .94 and .98, respectively. These values suggest a high degree of internal consistency among rating-scale items.

Three types of validity have been assessed for the PBRS: face, factorial, and concurrent validity. PBRS items were constructed on the basis of interviews with non-professional and professional mental health workers and educators after they examined the scale. In general, the resulting items correspond to observable child behaviors that require few inferences regarding hypothetical conditions or motives.

Factor analysis of PBRS items resulted in a solution with a clearly determined factor structure. Three factors emerged: (1) language, (2) social, and (3) psychomotor skills.

The scale involves rating a child's observable behaviors on a range from lower skill levels to higher skill levels. There are 20 items with each item having four or five skill levels (way stations) on the path of development from low to high. For each item the rater is expected to choose the level closest to the actual behavioral level of the child. If the behavioral skill is not firmly established, then the lower skill level is chosen. The PBRS is filled out according to observations of what a given child has been doing on a daily basis. The scale requires observed behaviors, not inferred potential nor isolated signs of capabilities. According to the authors, we should "[c]onceive of the PBRS as an instrument that can provide useful and objective information about the achievement of behavioral milestones in preschool skills" (Barker & Doeff, 1980, p.9).

For purposes of interpretation, PBRS items are grouped in the following ways: (a) Total Score (all 20 items); (b) 3 Factor Scores (Language, Socialization, and Psychomotor Skills); and (c) 5 Subscales (Coordination, Expressive and Receptive Language, Environmental Adaptation, and Social Relations). Within each of these groupings, summed ratings are compared to norms by sex and age group and are classified as either Typical, Questionable, or Atypical. The dependent measures of interest for this study were of course the social scores, i.e. the social component and the factor scores. The factor score was inevitably the only measure used from this instrument as there were a greater number of items making up the factor score than the component score. The range of the socialization

factor score was between 8-33, the average socialization factor score for our sample was 23.95 with a standard deviation equal to 5.2.

According to a review of the PBRS by Mace in the Tenth Mental Measurements Yearbook (1989):

> The Preschool Behavior Rating Scale appears to be among the best screening devices for teachers to identify children who may have problems in the development of language, social, or psychomotor skills. Its principal strengths are the ability to facilitate agreement between independent raters and to identify those children in need of further evaluation or services (p. 658).

In addition, all child participants took the Diagnostic Inventory for Screening Children (DISC), and the McCarthy Scales of Children's Abilities (McCarthy, 1972). Both assessments were performed by a qualified test administrator in the family's home.

The DISC is made up of an inventory of skills covering several areas of functioning: (a) gross and fine motor, (b) receptive and expressive language, (c) auditory and visual attention and memory, and (c) self help and social skills. The DISC covers the age range from birth to five years. The DISC provides a profile of scores so that each area of development can be examined. Within each domain, the DISC provides raw scores, age equivalent values, and percentile scores.

Only the parent-reported social component will be used in the present study. Conceptually, this score will be used not as an objective measure of the child's social competence, but rather as an index of the parents perception of their child's social abilities. As such, the reliability evidence reported in the DISC manual is irrelevant. Children in this sample were on average considerably below the norm ($\underline{M}$ = 28.06, $\underline{SD}$ = 31.3), were the norm is set at 100.

The general cognitive component of the McCarthy Scales of Children's Abilities (MSCA) was used as a general measure of the child's cognitive abilities or level. The instrument is widely used and accepted in clinical research. The test was standardised on a sample 1,032 children stratified by race, geographic region, father's occupational status, and, informally, by urban/rural residency, in accordance with the 1970 U.S. Census data. According to the manual the internal consistency coefficients for the General Cognitive Index (GCI) averaged .93 across 10 age groups between 2.5 and 8.5 years. Test-retest reliability over a 1-month interval on a stratified sample of 125 children obtained an average coefficient of .90 for the GCI. Validity evidence is equally strong as factor analytic data has tended to support the distinction of the different components as well as the GCI. According to Kaufman (1982), it *is* legitimate to use the GCI as an estimate of mental functioning because of high correlations between the GCI and IQ (as measured by the Stanford Binet and WPPSI IQ instruments) and the fact that the McCarthy includes so many tasks that resemble subtests of conventional intelligence tests. On average, this sample of children were below the norm on the general cognitive index ($\underline{M}$ = 89.62, $\underline{SD}$ = 14.7).

Validity of Research Project

The internal validity of a study is determined by the extent to which extraneous variables have been controlled by the researcher, and the extent to which the effects can be attributed to the independent variable (Chmiliar, 1986). Numerous threats to internal validity exist. However, the extent to which one is present is determined, in part, by the nature of the research design. Threats to internal validity include history, maturation, instrumentation, subject selection, subject mortality, and reactivity (Kratochwill, 1978). A brief discussion of these potential threats and steps that were taken to control these influences are outlined as follows:

1. History: The fact that all the assessments, both child and interactive, were conducted within a month of each other limits the possibility that history threatens the internal validity of this study.

2. Maturation: This refers to physical and/or psychological changes occurring within the subject over the course of the study which, in turn, may affect performance. Again, all the assessments, both child and interactive, were conducted within a month of each other. Therefore, the threat maturation poses to the internal validity of this study is minimal.

3. Instrumentation: The use of potentially unreliable measuring devices can pose a serious threat to the internal validity of a study. Although satisfactory observer agreement was obtained and maintained throughout the coding of parent-child interactions, no systematic control for observer drift or bias was performed. Continual discussion with the principal investigator, as well as exercising caution in the design and application of the observer coding system reduces this threat to internal validity. Reliability of the PBRS, DISC, and McCarthy were satisfactory, and they were normed on substantive samples.

4. Subject Selection: All participants met the same entry criteria, and the results are only generalizable to this population. Subject selection does not pose a serious threat to internal validity.

5. Attrition: Subject mortality was not an issue in this study as all participants who fulfilled the assessment requirements were included in the study.

6. Reactivity: To control for reactivity, the data collectors were instructed not to participate in or interfere with the child-parent interaction.

CHAPTER IV

Results

The analyses reported here were performed almost entirely using computer software provided by the Enhancing Family Resiliency project. All analyses were performed using the Statistical Package for the Social Sciences (SPSS).The major references for the analysis were Glass and Hopkins (1984).

Study Questions

This investigation attempts to explore the relationship between characteristics of parents and children engaged in interaction, with parent and teacher measures of the child's social competence. Several specific research questions will, therefore, be addressed.

1. What behaviors or characteristics of the parent during parent-child interactions are related to teacher ratings of child social competence?

2. What behaviors or characteristics of the parent during parent-child interactions are related to parent ratings of child social competence?

3. What behaviors or characteristics of the child during child-parent interactions are related to teacher ratings of child social competence?

4. What behaviors or characteristics of the child during child-parent interactions are related to parent ratings of child social competence?

5. Is there an interaction between the effects of parent and child engaged behavior on teacher ratings of child social competence?

6. Is there an interaction between the effects of parent and child engaged behavior on teacher ratings of child social competence?

Parent behaviors related to child social competence

The first two research questions to be addressed are:

1. What behaviors or characteristics of the parent during child-parent interactions are related to teacher ratings of child social competence?

2. What behaviours or characteristics of the parent during child-parent interactions are related to parent ratings of child social competence?

Parent behaviors refer to frequencies of behaviors coded according to the revised version of the Interactive Language Assessment form. This measure includes frequencies of both type and subtype behaviors (see Appendix C). Characteristics of the parent interaction refer to the proportion of each type and subtype of adult behaviors (see Appendix C). Means and standard deviations for both frequencies and percentages of parental initiations, responses, and nonengaged behaviors averaged over three minutes are reported in Tables 1, 2, and 3 respectively. Teacher ratings of child social competence was measured according to the Socialization factor score of the PBRS. The parent ratings of child social competence were assessed on the DISC.

Table 1

Parent Initiating behaviors

Adult Initiations

Parent Initiations	Frequency			Percentage		
	M	SD	n	M	SD	N
Instruction/mand	5	2.99	40	17.28	9.22	40
Question	5.48	3.08	40	18.41	7.75	40
Recruit child's attention	0.51	.79	40	1.96	3.11	40
Prompt	3.23	2.31	40	11.14	1.18	40
Total Initiations	13.86	5.66	40	47.52	13.34	40

Table 2

Parent Response behaviors

Adult Responses

Parent Responses	Frequency			Percentage		
	M	SD	n	M	SD	N
Repeat	0.69	0.77	40	2.58	3.17	40
Mirroring	0.08	0.47	40	0.35	1.63	40
Expansion	0.38	0.53	40	1.23	1.84	40
Seeking Clarification	1.05	1.14	40	3.62	3.98	40
Acknowledge/Praise	1.70	1.93	40	5.47	5.51	40
Follow child's lead	3.58	2.02	40	13.29	8.34	40
Unintelligible response	0.25	0.47	40	1.00	1.91	40
Total Responses	8.85	3.60	40	31.35	11.23	40

Table 3

Parent Non-Engaged behaviors

	Adult Non-engaged Behaviors					
	Frequency			Percentage		
Parent Non-engaged behav.	M	SD	n	M	SD	N
Unintelligible	1.21	1.29	40	5.12	6.48	40
Comment	4.29	2.71	40	14.70	7.70	40
No response	0.35	0.73	40	1.30	2.67	40
Total Non-engaged behavior	5.85	2.66	40	21.13	8.95	40

Correlations were computed relating the frequency and proportion of types and subtypes of parental behaviors with both teacher and parent ratings of child social competence. Significance was set at a .05 level.

Teacher Ratings

No parent behaviors alone or in combination were correlated with teacher ratings of child social competence. Similarly, when tabulated as a percent of adult behavior no behavior type was significantly correlated with teacher ratings of child social competence.

Parent Ratings

Parental comments were negatively correlated with parents' ratings of their child's social competence, $r(37) = -.44$, $p<.01$. The combined frequency of non-engaged parental behavior was also significant $r(37) = -.35$, $p<.05$. Parents who characteristically prompted had a greater likelihood of rating their child as more socially competent $r(37) = .35$, $p<05$. Parents whose behavior was characterised by more nonengaged comments, however, generally rated their children as less socially competent $r(37) = -.415$, $p<.05$. No other behavior types were significantly correlated with parental ratings of child social competence.

Child behaviors related to child social competence

The third and fourth research questions addressed are:

3. What behaviors or characteristics of the child during child-parent interactions are related to teacher ratings of child social competence?

4. What behaviors or characteristics of the child during child-parent interactions are related to parent ratings of child social competence?

Again, child behaviors refer to frequencies of behaviors coded according to the revised version of the Interactive Language Assessment form. Characteristics of child interactions refer to the proportion of each type and subtype of child behaviors during the interaction (see Appendix C). Means and standard deviations for both frequencies and percentages for child initiations, responses, and non-engaged behaviors are reported in Table 4, 5, and 6 respectively.

Table 4

Child Initiating behaviors

Child Initiations

	Frequency			Percentage		
Child Initiations	M	SD	n	M	SD	N
Verbal Request	1.00	0.96	40	4.13	4.10	40
Non-verbal Request	0.27	0.60	40	1.26	3.23	40
Question	1.51	1.39	40	5.74	4.88	40
Total Initiations	2.79	1.80	40	11.12	7.43	40

Table 5

Child Responding behaviors

Child Responses

Child Response Behaviors	Frequency			Percentage		
	M	SD	n	M	SD	N
Obligatory Correct	6.15	2.67	40	24.46	10.20	40
Related/Incorrect	1.98	1.95	40	7.89	7.50	40
Unrelated	0.94	1.05	40	3.83	4.52	40
Unintelligible	1.01	1.19	40	4.02	4.52	40
Imitative	0.70	1.08	40	2.66	3.97	40
Total Responses	10.78	4.18	40	42.85	15.48	40

Table 6

Child Non-engaged behaviors

Child Non-engaged behaviors

Parent Non-engaged behav.	Frequency			Percentage		
	M	SD	n	M	SD	N
Unintelligible	1.48	2.10	40	5.56	7.14	40
Comment	5.02	3.34	40	19.54	12.04	40
Non-verbal Behaviors	5.08	2.53	40	20.38	10.74	40
Lose Interest	0.14	0.32	40	1.27	2.95	40
Total Non-engaged behavior	11.71	4.40	40	46.02	2.31	40

Correlations were computed relating the frequency and proportion of types and subtypes of child behaviors with both teacher and parent ratings of child social competence. Significance was set at a .05 level. For reasons of clarity, child behaviors and characteristics will be discussed in terms of the categories of initiations, responses, and nonengaged behaviors. Significant correlations are shown in Tables 7 and 8 for child initiations.

Child Initiations

Teacher Ratings

In general, the frequency of child initiations was negatively correlated with teacher ratings of child social competence. More specifically, the frequency of both verbal requests and questions were significantly negatively correlated with teacher measures of child social competence.

Table 7

Frequencies of child initiation behaviors by ratings of child social competence

Frequencies of Child Initiations	Teacher Rating of Social Competence		Parent Rating of Social Competence	
	n	r	n	r
Verbal Requests	37	-.34*	37	-.32
Non-verbal Requests	37	-.06	37	-.22
Questions	37	-.44**	37	-.09
Total Initiations	37	-.54**	37	-.32

Note. *$p < .05$. **$p < .01$.

Child interactions that were characterised as involving a greater proportion of initiations were significantly negatively correlated with teacher ratings of child social competence. Children whose interactions were characterised by a greater proportion of questions were generally rated as less socially competent by teachers.

Table 8

Proportion of child initiation behaviors by ratings of child social competence

Proportions of Child Initiations	Teacher Rating of Social Competence		Parent Rating of Social Competence	
	n	r	n	r
Verbal Requests	37	-.27	37	-.29
Non-verbal Requests	37	-.06	37	-.18
Questions	37	-.43**	37	-.10
Total Initiations	37	-.46**	37	-.31

Note. *p < .05. **p < .01.

Parent Ratings

The frequency of child initiations were not correlated with parent ratings of child social competence. Nor were any subtypes of child initiation behaviors significantly correlated with parent ratings of child social competence. In fact, no relationship whatsoever existed between child initiation characteristics and parent ratings of child social competence.

Child Responses

Teacher Ratings

Frequencies of child response behaviors were not significantly correlated with teacher ratings of child social competence. When these response behaviors were calculated as a percentage of total child behaviors, there was a significant positive correlation between children who proportionally made more responses and teacher ratings of child social competence $r(37) = .37$, $p<.05$. No response subtypes were significantly correlated with teacher ratings of child social competence.

Parent Ratings

Parallel to teacher ratings, frequencies of child response behaviors were not significantly correlated with parent ratings of child social competence. Surprisingly, however, the more the child's behavior was characterised as involving incorrect responses the higher parents reported their child's social competence $r(37) = .33$, $p<.05$.

Non-engaged behavior of the child

Teacher Ratings

The more non-engaged behavior the child performed in her/his interaction with her/his parent the poorer teachers rated her/his social competence $r(37) = -.33$, $p<.05$. The number of comments that children made while interacting with their parents was significantly negatively correlated with teacher ratings of child social competence $r(37) = -.40$, $p<.05$. When these behaviors were tabulated as a percentage of total child behaviors there were no significant correlations between the percentage scores and teacher ratings of child social competence.

Parent Ratings

No significant correlation existed between frequency of non-engaged behavior of the child and parent ratings of child social competence. Surprisingly, there was a significant positive correlation between the frequency with which children lost interest in their interactions with their parents and the parent ratings of child social competence $r(37) = .33$, $p<.05$. When these behaviors were tabulated as a percentage of total child behaviors there were no significant correlations between the percentage scores and parent ratings of child social competence.

Age

The child's age was not significantly correlated with either parent or teacher ratings of child social competence, or with any parent or child behavior. The bivariate correlation coefficient between teacher and parent ratings of child social competence was $r(34) = .43$, $p=.01$.

Gender

As almost all parent participants were mothers, no gender comparisons were performed on this basis. For children, however, gender differences on interactive behaviors and social competence measures were assessed using independent Samples t-tests, with Two-Tail Significance set at .05. Boys and girls did not differ significantly in their interactive behaviors with their parents. Parents of girls made more frequent instructions ($M = 5.71$, $SD = 2.99$) than did parents of boys ($M = 3.68$, $SD = 2.61$), $t(38) = -2.23$, $p < .05$. Parents of boys, however, made more frequent expansions ($M = 0.64$, $SD = 0.63$) than did parents of girls ($M = 0.23$, $SD = 0.4$), $t(38) = 2.51$, $p < .05$. Teachers did not rate children differently on the basis of the child's gender. Parents, however, rated girls ($M = 38.3$, $SD = 33.0$) much higher than boys ($M = 6.73$, $SD = 9.8$), $t(35) = -3.23$, $p < .01$, on measures of child social competence.

Interactions

The final research questions addressed are:

5. Is there an interaction between the effects of parent and child engaged behavior on parent ratings of child social competence?

6. Is there an interaction between the effects of parent and child engaged behavior on teacher ratings of child social competence?

In order to examine these questions, children were grouped in high and low groups on the basis of the percent of their initiations and responses. Parents, on the other hand were grouped into high, medium, and low groups on the basis of their percent of initiations and responses. Since the purpose of this investigation was to determine if certain characteristics of parents and children engaged in interaction, interact, only the percentile scores, which were used to represent qualitative differences in interactive behavior, were used. Percentile scores were chosen over frequency because it was hypothesised that an interaction would exist between the quality of parent and child interactions and not necessarily in the quantity of parent and child interactions. Although not synonymous, percent of initiations may reflect how controlling the individual is in the interaction, and the percent of responses may reflect how responsive the individual is.

Eight different 2*3 two-way analyses of variances were performed. High and low initiating and responsive children, by high, medium, and low initiating and responsive adults on both parent and teacher ratings of child social competence, constitute the eight different analyses. An alpha level of .05 was used for all statistical tests. Of all the analyses only one demonstrated a significant two-way interaction. This was observed between child initiation and adult initiation groups, $F(2,30) = 4.2$, $p < .05$ on measures of teacher ratings of child social competence. The interaction is displayed graphically in figure 1.

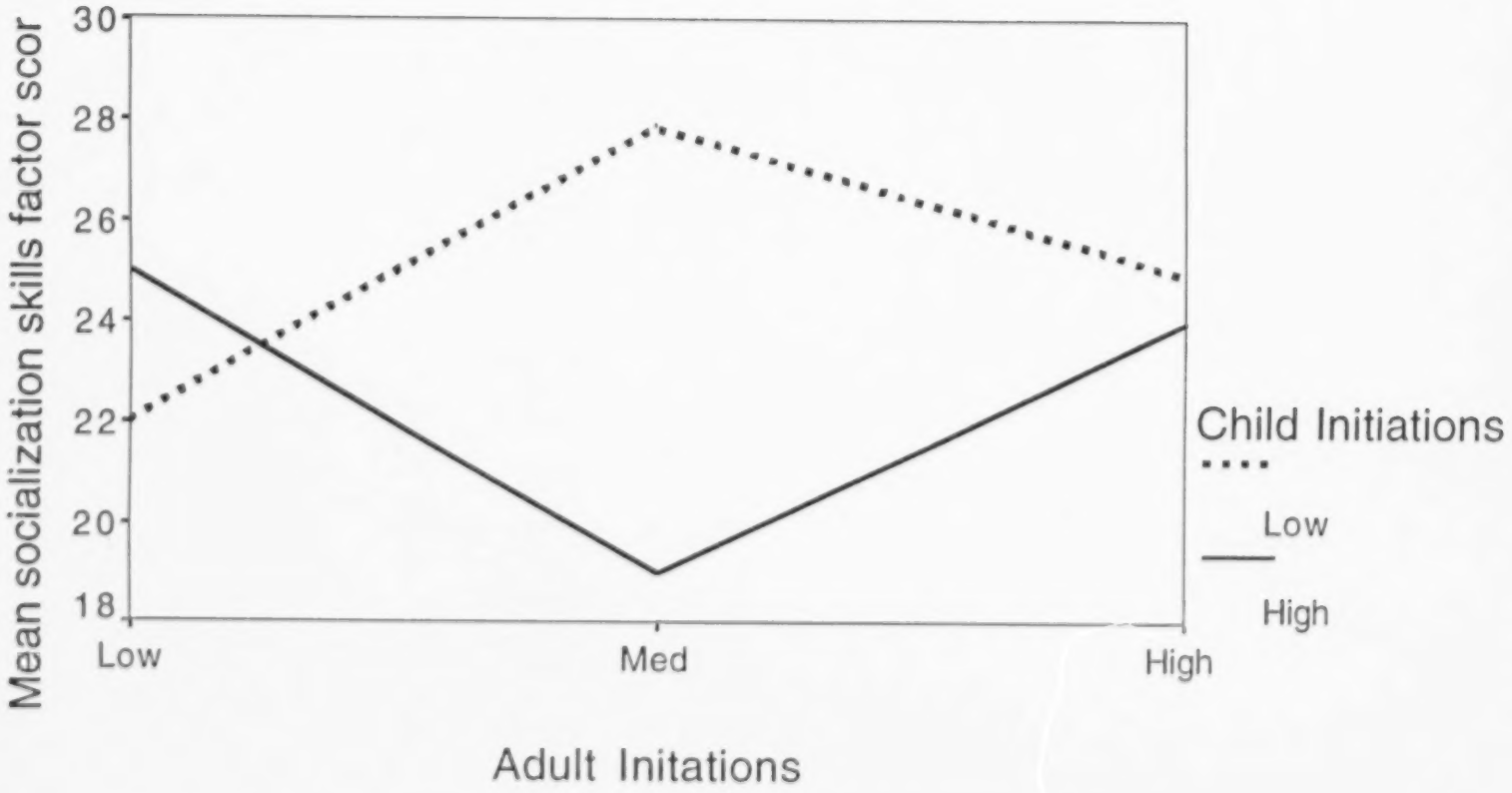

Figure 1. Interaction between parent and child initiation behavior on teacher ratings of the child's socialization skills

On the basis of this significant interaction a new variable was created. This new variable identifies the six groups observed in the interaction. They are; high initiating children with low initiating adults, high initiating children with medium initiating adults, high initiating children with high initiating adults, and low initiating children with low, medium and high initiating adults. Means, frequencies and standard deviations are reported in Table 9. Post-Hoc assessment of group differences using the Least Significant Difference method was performed. According to the LSD multiple range test with a significance level of .05, high initiating children with medium initiating parents were significantly different on teacher ratings of child social competence than low initiating children with either medium or high initiating parents. Generally, teacher competence ratings were similar for both high and low initiating children with either high or low initiating parents. Differences did exist, however, between high and low initiating children with medium initiating parents.

Table 9

Teacher ratings of child social competence for high and low initiating children by high, medium, and low initiating adults

	Child Initiations					
	Low			High		
Parent Initiations	M	SD	n	M	SD	N
Low	22.0	5.42	4	25.0	2.76	6
Medium	26.28	5.74	7	19.0	6.44	5
High	24.9	3.54	10	24.0	6.67	5

Child initiation/response Profile

In order to further investigate the possibility that some or all of these high initiating children may already represent a clinical sample and therefore, account for their poorer teacher ratings of child social competence, child behavior while interacting with parents was further explored. Children were grouped as high and low responding children on the basis of their proportion of responses. These two groups were crossed with high and low groups of initiating children. Consequently, four groups were identified; high initiating-high responding children, high initiating- low responding children, and low initiating -high and low responding children. A one-way analysis of variance was performed comparing mean differences of the four identified groups on the basis of teacher ratings of child social competence. Frequencies, means and standard deviations for these four groups are reported in table 10. Although there was no significant One-way analysis of variance, children in the high initiating -low responding group appeared to be scored poorer in social competence by teachers.

Table 10

Teacher ratings of child social competence for high and low initiating children by high and low responding children

	Child Initiations					
	Low			High		
Child Responses	M	SD	n	M	SD	N
Low	23	7.01	6	21.82	3.5	11
High	25.53	3.50	15	25.00	1.4	5

A crosstab between the six parent-child initiation groups and the four child profile groups was performed (see table 11). This was done to explore the possibility that group differences of parent-child initiating behavior on measures of teacher ratings of child social

Table 11

Frequencies of Parent-child Initiation Groups by Child Initiating/responding Profile Groups

Parent-child Interaction groups	Child Initiating/Responding Profile			
	Low initiating/ low responding children	High init./ low resp. children	Low init./ high resp. children	High init./ high resp. children
Low initiating child/ low initiating parents				
Count	3		2	
Row%	50		50	
Low init. child/ medium init. parents				
Count	4		3	
Row%	57.1		42.9	
Low init. child/ high init. parents				
Count			10	
Row%			100	
High init. child/ low init. parents				
Count		8		1
Row%		88.9		11.1
High init. child/ medium init. parents				
Count		4		1
Row%		80		20
High init. child/ high init. parents				
Count		2		3
Row%		40		60

competence may be better accounted for by child initiation/response profiles. Results showed that within the child and parent initiation groupings 4 out of 5 of the children who were high initiators and who had parents that were average or medium initiators were also low responders.

Gender differences

Chi-square analysis was performed in order to determine if there was a relationship between the six parent-child interaction groups, i.e., high/ low initiating child- by High/ medium/ low initiating adult, groups. According to the chi-square analysis, there were no differences among the interaction groups in the proportion of boys and girls. Although there was a very limited sample size in each of the different cells, it does not appear that mean differences between the interaction groups can be accounted for by the proportion of boys and girls in these groups. This same procedure was followed in order to account for the possible effects of gender in performance scores of children grouped according to their interaction profile. That is, children that were grouped into high initiating -low responding, high initiating- high responding , and low initiating -high and low responding children. Again there was no significant chi-square analysis. It therefore does not appear likely that either the interaction or the individual differences can be accounted for according to gender effects.

CHAPTER V

Discussion

Parent Interactive Behaviors related to child social competence

Teacher Ratings

Contrary to previous research findings parental behavior during parent-child interaction did not correlate with teacher ratings of child social competence. This may be a consequence of the nature of the observations. The present measure of parent characteristics relies exclusively on the frequency or percentage of specific coded behaviors. Further, parental behavior during interaction is not independent of child behavior. Parent responsiveness for instance is contingent in part on child initiation behavior. Similarly, although it may be argued that parents who make more or proportionately more response behaviors are more responsive, this measure does not account for the quality of those responses.

Parent Ratings

The significant negative correlation between both frequency and proportion of parent comments with parent ratings of child social competence has no obvious interpretation. Considering that a comment is scored when a parent makes a statement that does not require the child to respond and is not in response to the child, it is classified as a non-engaged behavior. It is possible, though speculative, that parents who find their interaction with their children somewhat uncomfortable or unrewarding will make more independent comments. Consequently, they rate their children as less socially competent.

Other parent and family factors that are often associated with the development of child social competence are variables such as socio-economic status, gender of the parent,

and single versus two parent households. Since all families in this study are of low socio-economic status as required by the Head Start program, the influence of this variable is controlled for. Similarly, virtually all parent participants in the present study were mothers, consequently, all interpretations are generalizable only to mother-child interactions. Furthermore, no significant differences existed between children of one and two parent households on either teacher or parent ratings of child social competence. Due to the small sample size, no distinctions could be made between families on the basis of ethnic differences. Overall these factors are unlikely to have confounded the results.

Child Interactive Behaviors Related to Teacher Measures of Child Social Competence

Teacher Ratings

Perhaps the most compelling results of this study are the significant negative correlations between both frequency and percentage of child initiations and teacher ratings of child social competence. According to the literature, initiations are a necessary and important aspect of social behavior. In fact, social interactions could not exist in their absence. Consequently, one would presume that children who demonstrate this skill during interactions would be considered more socially competent.

Although no conclusive interpretations can be drawn from this correlation, one possible interpretation is that, regardless of innovations and improvements in early childhood education, children are still considered "better seen and not heard". This interpretation, however, assumes that these children initiate more in the preschool as well. According to the results of a study by Putallaz (1987), child behavior demonstrated in interactions with their parents was significantly and positively correlated with the behavior of the child in interactions with peers. It is therefore probable that these children will make more initiations while engaged with their age mates. However, further studies are needed to substantiate this hypothesis.

The negative correlation between the frequency of child comments and teacher ratings of child social competence is also consistent with the interpretation that in the preschool setting children are considered "better seen and not heard" by preschool staff. This interpretation appears tenable in light of the fact that neither frequency nor proportion of child initiations or comments were related to parent measures of child social competence. Perhaps in a home setting where there is more time for one-on-one interaction, and where child initiations may be less disruptive, interactions involving greater child initiations are more rewarding.

It is also quite conceivable that children who make a lot of initiations in interactions are generally not well liked by peers. Considerable evidence has been generated in studies of children with attentional or behavioral problems that suggests children who are impulsive lack friends and social skills (see for examples, Giddan, 1990; Landau & Moore, 1991; Odom, McConnell, & McEvory, 1993). In fact, the Diagnostic and Statistical Manual Fourth Edition (1994) identifies impulsive children as those who initiate conversations at inappropriate times, and frequently interrupt or intrude on others. In this study, no systematic assessment of the quality or appropriateness of the initiations was made. Thus, any interpretation along this line is speculative. The fact that the children in this study are considered at heightened risk for attentional and behavioral problems suggests the importance of pursuing this line of inquiry.

All that can be said decisively is that children, among our sample of at risk families, who make proportionally more and more frequent initiations while interacting with their parents tend to fair poorly on teacher ratings of social competence.

Although no specific response behaviors were correlated with either parent or teacher ratings of child social competence, the total proportion of child responses were positively correlated with teacher ratings of child social competence. This is consistent with the notion that preschool children are "better seen and not heard".

Other child variables such as age and gender are often considered to be important variables in development. Due to the small sample size, these variables were not addressed in the study questions. However, the age of the child was not significantly correlated with either parent or teacher ratings of child social competence. Although no gender differences existed on teacher ratings of child social competence, gender differences did exist on measures of parent reports of child social competence. In general, boys were rated as less socially competent than girls.

Parent Ratings

As mentioned previously, no child initiation behaviors or characteristics were related to parent ratings of child social competence. Consistent with the previous interpretation, parents may be more tolerant of their children's demands and initiations. The correlation's observed were all negative in direction although not significant.

Surprisingly, a significant positive correlation was observed between the percent of child incorrect responses and parent ratings of child social competence. Similarly, a significant positive correlation was observed between the frequency with which children lost interest in their interactions with parents and parent ratings of child social competence. As these behaviors are often associated with a breakdown of communication one would assume a negative relationship. Since very few of these behaviors were actually recorded, this would increase the standard error of measurement, which calls into question the reliability of this relationship. It is possible, however, that parents may attempt to compensate for difficulties that these children face by rating them higher.

Interactions

Parent Ratings

The fifth research question asks; is there an interaction between the effects of parent and child engaged behavior on parent ratings of child social competence? As there were no

significant interactions identified, this study does not support a hypothesis suggesting that the effects of parent and child behaviors on parent ratings of child social competence interact.

Teacher Ratings

The final research question to be addressed concerns whether an interaction occurs between parent and child interactive characteristics on teacher ratings of child social competence. The question is posed as follows; Is there an interaction between the effects of parent and child engaged behavior on teacher ratings of child social competence?

This study, therefore, attempts to asses whether children with certain initiating and responding characteristics that have parents with certain initiating and responding characteristics would be rated differently according to teacher ratings of child social competence.

On a purely intuitive level, children whose interactions are characterised by a greater proportion of initiations may be considered more active or involved. Similarly, children who's interactions are characterised by a fewer proportion of initiations may be considered more withdrawn. Although exceptions undoubtedly exist, few would argue that this is often the case. Likewise, children who's interactions are characterised by a greater proportion of responses may be considered more responsive. The validity of this interpretation is questionable, however, considering that child response behaviors are contingent on the initiating behaviors of the parent. In order for a response behavior to be coded, some directive or initiation must be given by the interactive partner.

Literature involving parenting style or style of parent-child interactions often refers to the broad dimensions of "Power" and "Affect". As no measures of affect were included in this study, this dimension will not be discussed. According to Pettit, et al (1991), power refers primarily to controlling techniques, from assertive, to more inductive forms. Many of the studies investigating parenting style often conclude that more moderate behavior

along the dimension of power is preferable. That is to say, parents should be engaging but not too controlling while interacting with their children. In the present study, parents whose interactions with their children are characterised by a greater proportion of initiations can be considered to be more controlling (at least within the interaction), and parents whose interactions are characterised by fewer initiations can be considered more passive. Parental responsiveness or responsivity is another characteristic of parenting that is thought to influence the child's development. According to the study by Pettit et. al (1991), maternal responsiveness predicted high levels of children's social competence. Parents with a greater proportion of responses may be thought of as more responsive, and those with a fewer proportion as less responsive.

The only significant interaction that was observed in this investigation involved the dimensions of child and parent initiations. This finding is not surprising considering that initiation scores, both frequency and percent, are less dependent than responses. Further, the significant interaction only existed on teacher measures of child social competence. The interaction is represented graphically in figure 1.

Low Initiating Children

On the bases of the correlational findings it was anticipated that low initiating children would receive higher teacher ratings of child social competence than high initiating children regardless of adult initiating behavior. However, this tended not to be the case when parents were characterised as high or low initiators. Only when parents were average initiators were low initiating children rated higher on teacher ratings of child social competence. This finding is consistent with the notion that moderate levels of control are preferable. In fact, the trend observed for low initiating children is generally consistent with the literature. Although not statistically significant, low initiating children with average or medium initiating parents were rated higher in social competence by their teachers than low

initiating children with either high initiating (controlling) parents, or low initiating (passive) parents.

High Initiating Children

What is difficult to interpret is the trend observed with high initiating children. In this case, the reverse relationship exists. High initiating children with moderate initiating parents were rated by teachers as having the poorest social competence. Further, high initiating children with either low or high initiating parents were rated higher by teachers. In the case of low initiating adults, children may accommodate their interactive behavior with their parents in order to have rewarding and fulfilling interactions with their parents. If their parents are relatively passive, their children may initiate more in order to engage their interactive partners. According to this interpretation, these children may not necessarily initiate more in all interactions but do so in interaction with passive partners. Observation with others, either adults or peers, would be required in order to investigate this possibility.

It is also possible that the other two groups of high initiating children represent a distinct population of children who are generally more active. If, in fact, this is the case, then it has implications for parent training of such children. For parents, making more initiations and, therefore, controlling the interaction to a greater extent, might lead to greater social competence in their children.

This interpretation is generally consistent with a best fit notion of parent-child interaction. In this case, teacher ratings of child social competence improves when characteristics of the parent during child-parent interaction fit in specific ways with characteristics of the child. Parent intervention studies that target the behavior of parents with children who make proportionally more initiations might better demonstrate this best fit notion.

Another possible explanation for this observation may lie in the sample of children used. All children in this sample are considered at heightened risk for later developmental

delays or problems. Further, as part of the entry criteria for the project, all children were assessed to be already delayed in two or more developmental areas. As such, high initiating children may in fact represent or partially represent children with attentional or behavioral problems. This possibility is purely speculative as no clinical assessment of these children was made. However, poor social competence is considered a hallmark for such problems as are a greater number of inappropriate initiations, and probably initiations in general. If in fact these children represent a clinical sample, then, it may not be surprising that the quality of their interactions differs from that expected for a normal population.

In order to further investigate the possibility that some or all of these high initiating children may already represent a clinical sample and therefore, account for their poorer teacher ratings of child social competence, child behavior while interacting with parents was further explored. Generally, children whose interactions with their parents were characterised by a greater proportion of initiations and a fewer proportion of responses were rated by teachers as less socially competent. Further, when compared with the child and parent initiation groupings 4 out of 5 of the children who were high initiators and who had parents that were average or medium initiators were also low responders.

The profile of child behavior for these children is rather distinct and may better account for their poorer ratings than the interaction between parent and child characteristics. It may be argued, for instance, that the child behavior of high initiating -low responding children with average initiating adults is less contingent on the behavior or interactive characteristics of the parent. As mentioned previously, both the frequency and percentage of response behaviors are at least to some extent dependent on the initiating behavior of the fellow interactant. Where parents are making an average number of initiations one would expect an even split between high and low groupings of children on the basis of their responses. The fact that 80% of these children are considered to be low responders, suggest that their behavior is less contingent on the behavior of their parent.

Summary

In summary, although a number of parent and child behaviors coded during parent-child interactions were correlated with teacher ratings of child social competence, the frequency and proportion of child initiations were the most highly correlated. Child initiation behavior was negatively correlated with teacher ratings of child social competence. One interpretation of this finding is that in the preschool setting children are still considered "better seen and not heard". One important line of future research would be to assess the appropriateness of the child initiations. It may be the case that children who made proportionally more initiations, also made more inappropriate initiations.

Parent characteristics such as warmth, responsiveness, predictability, and consistency (Pettit et. al, 1991), and patterns such as authoritative/authoritarian, or democratic/restrictive (Dekovic' & Janssens, 1992), have previously been identified as predictors of child social competence. Affective measures as well as sequential analysis are needed in order to investigate such constructs. Future studies would do well to implement such assessment strategies in order to replicate these previous findings.

Two distinct interpretations of the interaction between parents and children grouped according to their initiating behavior are presented. According to the first interpretation, there is a goodness of fit between child and parent interactive characteristics. That is, for children who make proportionally fewer initiations, having parents who are middle initiators, that is, are not high initiators (controlling), or low initiators (passive), are rated higher in social competence by both parents and teachers. For high initiating children, it is argued, having parents that are high initiators (controlling), is related to higher teacher ratings of child social competence, than is having average or middle initiating parents. It is further argued that children of low initiating (passive) parents may accommodate their behavior in order to make their interactions more rewarding, by initiating more. Consequently, these children will be rated higher in social competence by teachers than will high initiating children with average initiating parents.

The second interpretation is that regardless of the initiating characteristics of children in interaction with their parents, parents who initiate a moderate amount, that is, who don't make too many (controlling), or too few (passive) initiations will have children who are rated by teachers as more socially competent. At exception, however, are children that make more initiations and whose response behavior does not appear to be contingent on parent initiating behavior. Although all the children in this sample are considered at risk for developmental delays, it is argued that this subpopulation may represent children who would be diagnosed with such delays. Clinical assessment would be needed in order to determine the legitimacy of this interpretation.

Although both interpretations are tenable, they are both purely speculative. Further, aspects such as the appropriateness of the behaviors or the affective quality of the interactions need to be included in order to better understand and characterise the quality of the parent-child interactions. What does appear likely is that parent-child interactive behavior is related to teacher measures of child social competence, and that child characteristics alone do not capture the complexity of social competence.

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APPENDIX A

Ethical Approval and Concent Forms

Ethics Review Approval

Consent Form (experimental group)

Consent Form (control group)

September 30, 1996

From: Department of Educational Psychology
Research and Ethics Committee

The Research and Ethics Committee of the Department of Educational Psychology has reviewed the attached proposal and finds it acceptable with respect to ethical matters.

Applicants: Dr. G. Kysela on behalf of Darcy Fleming (graduate student).

Title: Parent-Child Interaction Behavior and the Development of Child Social Competence.

Participating Agency(ies):

Recommended Change:

Chairman or Designate, Research and Ethics Committee

Date Sept 30/96

Child and Family Resiliency Project

CONSENT FORM

I/We understand that we have been selected to take part in the Child and Family Resiliency Project. I/We understand we will be working with an Interventionist who will visit me/us in my/our home every two weeks for one full year. I/We will work together on two different interventions for six months each.

I/We expect to be visited at home by the a Research worker every other month for two visits of about 45 minutes duration. We are willing to take part in child-parent play sessions at home, which will be videotaped and analysed by the research team led by Dr. Gerry Kysela. We understand that we will also be asked to problem solve some everyday family situations presented to us and to fill in some questionnaires. The questionnaires will be given at the beginning of the project, after six months and one year in the project and then at the nine month follow up. Team members will also videotape my child at playtimes at the ABC Headstart program every two months during the first year of the project.

I/We understand that all the information gathered in this study will be kept confidential. The names of our child and other family members will not be disclosed at any time or appear in any research document or report.

I/We understand that we are free to withdraw from the project at anytime and that this will not interfere with our full participation in the ABC Headstart program.

.....

I_____ consent to and give consent for my

daughter/son_____ to take part in the project.

I agree to participate in home observation sessions and for my child to be seen in the ABC Headstart Center. I will complete the questionnaires at intervals during the project.

I understand that I can deny answers to any questions I prefer not to answer and that I can withdraw from the study at any time without prejudicing current or future treatment. I know I can contact Dr. G. Kysela, Dr. L. McDonald or Dr. J. Drummond at 492 8185 at any time if I have concerns about the study.

_____ _____

Signature of parent/guardian Print name here

_____ _____

Relationship to child Date

_____

Signature of Principal Investigator

Child and Family Resiliency Project

CONSENT FORM

I/We understand that we have been selected to take part in the Child and Family Resiliency Project. I/We expect to be visited at home by the a Research worker every other month for two visits of about 45 minutes duration. We are willing to take part in child-parent play sessions at home, which will be videotaped and analysed by the research team led by Dr. Gerry Kysela. We understand that we will also be asked to problem solve some everyday family situations presented to us and to fill in some questionnaires. The questionnaires will be given at the beginning of the project, after six months and one year in the project and then at the nine month follow up. Team members will also videotape my child at playtimes at the ABC Headstart program every two months during the first year of the project.

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withdraw from the study at any time without prejudicing current or future treatment.

I know I can contact Dr. G. Kysela, Dr. L. McDonald or Dr. J. Drummond at 492 8185 at

any time if I have concerns about the study.

_____ _____

Signature of parent/guardian Print name here

_____ _____

Relationship to child Date

_____

Signature of Principal Investigator

APPENDIX B

Home Visitation

Script for Initial Consent

Protocol for Home Visits

Script for Toy Library Videotape

Script for Problem Solving

Criteria for Special Needs Funding

SCRIPT

Good morning/afternoon can I speak to.....

Hello my name is.....I am calling from the Child and Family project at the University, we visited you in the summer and talked with you about working with you while your child is in ABC Headstart this year.

We are starting to collect information from our families this month so I would like to fix up a visit with you and .....(child's name).....
The visit would take about 45 minutes. We will be bringing a selection of toys from the project toy library for ..to choose one. There will be a couple of questionnaires to fill in and we would like to video ...playing with you.

When would be a good time to come? It needs to be a time when ..is not at Headstart because we need to see you both.

OK so I will come on ..at.....
Can I just confirm your address I have it as.....
(If you are unfamiliar with that part of town get directions)

If something comes up and this time is no good you can get in touch with me on 492 8185.

Thank you very much I look forward to meeting you and.....
Goodbye

Remember to ring just before your visit if you set it up more than 2 or 3 days in advance.
You will arrange the second visit at the house after the first visit.
You will need to take consent forms with you for the families to sign MAKE SURE you give the correct forms i.e. experimental or control.

Protocol For Home Visits From Data Collectors

APPOINTMENTS

- When setting up your appointments make sure you ask for directions if you are unfamiliar with that part of town to cut down on the chances of getting lost.
- Do not make appointments too far in advance, or if you do, telephone to confirm just before you leave for the appointment.

VISITS

- You will need to see the family on two separate occasions.
- On the first visit you will take a choice of 3 toys from the toy library with you and encourage mom and child to play and then select a toy to keep until November. You will videotape their interaction - about 20 minutes (maximum 30 minimum 10).
- On the second visit you will videotape a family problem solving session (about 15 minutes) followed by a 10 minute play session involving both parents (if applicable) with the same toy selected on the first visit.

SENSITIVITY

- All the families are volunteers in this research project so your schedule will fit around theirs. Be sensitive to family life and try to avoid mealtimes and bedtimes for children when arranging the appointments.
- Make sure the family knows how to contact you if they need to change their appointment - use the 492 8185 number, do not give your home phone numbers out. You will all get project cards at some point in the near future.

PREPARATION

- Before the visit mark up a videotape with the # of your family - do not put names on the tape. Try to be as organized as possible so you can just start filming without any fiddling around. Use a power outlet from a wall plug in the home if at all possible - remember to ask.

VIDEOTAPING

- Make sure you are familiar with the machine. You must take some tape and review it before the first visits. Do you know how to set up the microphones? You want to go in and show that you know what you are doing. Data collection must be efficient and slick. Remember to review your first two tapes with GMK or JA before you arrange any more visits. Your tapes will be reviewed at random times during the collection. All tapes must be kept locked in the project office.
- You need to videotape in the family room - other distractions should be removed as far as possible. Ask for the cat/dog etc. to go into another room. The TV should be turned off as should the radio or tape player - be aware of noise levels in the room from other children, adults too. Remember we need good sound quality on the tape.
- Make sure you get a really good frame set up with both mom/dad and child clearly visible for facial expressions, speech and body language. If it's too noisy with other children ask them if they can keep it down or play in another room for a few minutes.
- Explain to the parents before you start about the need to get a good clip of just them and their child.

COMMUNICATION

- Do not coach! We are collecting data on the family as they are now so do not tell them what they are 'supposed to do'. You could say something like "we are just getting about 15 minutes worth of tape of you, all playing together with the toys we bring each time".
- For the family problem solving sessions - same rules, do not interfere or offer suggestions - if the family finishes the scenario in 3 minutes because only one person spoke and no one else offered any suggestions then that is where the family is right now and that is the data we want.
- Follow the instructions on the assessment instruments to the letter - RELIABILITY and VALIDITY are important and with so many people involved in the project we must be sure that everyone is doing things in the same way in each home.

CHECKLISTS AND WRITTEN ASSESSMENTS

- Do not overwhelm the parent(s) with things they need to fill in, you are making two visits so think about dividing the written checklists to fill in between the visits. Do not get them all out at once so the parent is working through a pile of stuff. You will be asking them to complete the FAM, the shortened questionnaire, and the Hassles and Uplifts scale.

WRITE UP

- Write up any observations/field notes and put them in the computer in your family's folder as soon as possible after the visit.

ABUSE?

- Follow the guidelines for suspected abuse which you have been given.

PROBLEMS

- Inform GMK/JA if ANY problems occur as soon as possible, e.g. child sick and will not be in the study, parents moving, parent wishes to withdraw from the study, etc.

A REMINDER

- Confidentiality - all data you collect is confidential. You will not discuss any of the children or families with the Headstart Center Staff or with other families or project staff.

SCRIPT FOR TOY LIBRARY VIDEOTAPE

- **Set up the camera before you introduce the session or get out the toys because we would like to get your instructions to the family on tape each time as a reliability check.**
- **SWITCH ON**
- "On this visit we would like to get about 15 minutes of tape of you playing with -------- I have brought along a choice of toys from the project toy library. The two of you can look at each of the toys and play with them for a while. When you've tried them all out ----------should choose the one she/he would like to keep until we come back in a couple of months. When we come back we'll give you a new choice of toys. Do you have any questions before I get the toys out? (WAIT) OK here are the toys to try out.
- ONCE YOU HAVE BEEN TAPING FOR !% MINUTES AND/OR THEY HAVE PLAYED AND CHOSEN THE TOY STOP THE TAPE
- "OK that's great, thanks very much I'm stopping taping now"
- If they have not chosen their toy say "OK time to choose the toy_____"
- At this point reassure the family they did a good job, collect up the spare toys and talk to the child about the toy they chose

POINTS TO REMEMBER

DO NOT tell the family exactly what we are hoping to see - turn taking, imitation etc that would defeat the object of the exercise.

DO NOT talk to them while they are playing or interfere with what is going on

MAKE SURE you can see both parent and child faces and that the microphone is close enough to pick up the sound.

MAKE SURE you got them to switch off the TV, radio or tape player, put out the cat/dog and keep other distractions to a minimum. Do not be shy about asking people to be quiet if they are not involved in the taping - it's better to tell them now rather than have to go back and do another visit.

Script for Problem Solving

- Set up the camera before you introduce the session because we would like to get your instructions to the family on tape each time as a reliability check.

- SWITCH ON

- INSTRUCTION
- "We need to have the whole family together for this session." (Check to make sure that the whole family is present. Get their names and remember to use them in the situation).

- "On this visit we would like to get about 15 minutes of tape of you dealing with a common family situation. In fact it may be one that you have dealt with yourselves. But, if it is not, please just pretend that it is a situation which your family is dealing with now."

- "I will read the situation to you."

- "I will ask the question "What would you do as a family to deal with this situation?""

- "Then I will say "You may start now""

- REMEMBER
- DO NOT tell the family exactly what we are hoping to see - describing behaviour, brainstorming etc.
- DO NOT talk to them while they are dealing with the situation
- MAKE SURE you have the family in a comfortable place where you can video all of them and where the mic will pick up their conversations.
- MADE SURE you get them to switch off the TV, radio or tape recorder, put out the dog/cat and keep other distractions to a minimum. Do not be shy about asking people to be quiet if they are not involved in the taping - it's better to tell them now rather than have to go back and do another visit.

Your family consists of the following people
- Mom - name
- Dad
- Focus child
- Sib 1
- Sib 2
- etc.

(Dad), you work outside the home.

(Mom), you worked up until your last child was born. Now you stay at home, but you are thinking about going back to work.

(Focus child) is attending ABC Head Start.

(Focus child) has started to complain about stomach ache and wants to stay home from ABC Head Start in the morning.

(Focus child) used to really like to go to ABC Head Start. Every morning (he/she) could hardly wait to get there to play with the other kids and talk to the teacher.

(He/she) used to always come home with lots of stories about the day at ABC Head Start. Now, you notice that (focus child) comes home and watches TV and plays alone.

Now, when you ask about what happened that day at ABC Head Start (focus child) starts to cry and can't say anything.

Q: What would you do as a family to deal with this situation?

Criteria for Special Needs Funding

1. Criteria for Mild-Moderate Disability

Emotional/Behavioral Disability: Typically, emotional/ behavioral disabilities are characterized by demonstration of one or more of the following traits:

1) an inability to establish or maintain satisfactory relationships with peers or adults

2) a general mood of unhappiness or depression

3) inappropriate behavior or feelings under ordinary conditions

4) continued difficulty in coping with the learning situation in spite of remedial intervention

5) physical symptoms or fears associated with personal or school problems

6) difficulties in accepting the realities of personal responsibility and accountability

7) physical violence toward other persons and/or physical destructiveness toward the environment.

Learning Disability: Students with learning disabilities exhibit one or more of the following characteristics:

*disorganization
*distractability
*impulsivity
*hyperactivity or hypoactivity
*inflexibility
*perseveration
*weak social relationships

Speech and Language Impairment:

Speech Impairments: The student who has a speech impairment has speech which deviates so far from the speech of others that it calls attention to itself, interferes with communication or causes maladjustment.

Communication Impairments: A communication impairment refers to disorder in comprehension and / or use of language/ articulation voice and fluency skills.

Language Disorders: encompass problems in semantics, syntax, morphology and certain aspects of phonology.

Articulation Disorders: are problems with speech sound production and their integration. They are characterized by substitutions, distortions, omissions and additions.

Criteria for Sever Disability

Emotional/ Behavioral Disability: Students with severe emotional and/or behavioral disabilities display chronic, extreme and pervasive behaviors that drastically interfere with their ability to function within existing social, cultural or age-appropriate standards. Their behaviors are so profoundly inappropriate that they significantly interfere with the educational environment and the safety and progress of self and/or others. An assessment or opinion from a chartered psychologist or psychiatrist must be obtained to indicate the nature and severity of the disability.

Eligible students must be exhibiting chronic, excessive and pervasive behaviors such as:

* dangerously aggressive, destructive and/or impulsive behaviors, including violence or serious threats of violence to self, others or to property
* autism
* self-stimulation, perseveration, echolalia and/or asphasic behavior
* severe passive or withdrawal behaviors, schizophrenia, manic depression or similar severe disorder
* other behavioral/ emotional disorders of similar nature and consequence.

APPENDIX C

Interactive Language Assessment Device

Interactive Language Scoresheet Summary

Interactive Language Scorsheet

Interactive Language Code

Reliability Summary Sheet

Interactive Language Scoresheet Summary

Child's Name: Date:

Session#:

	Minutes 1	2	3	Tot	Tot	1	2	3	
Initiations									Responses
Instruction/Mand									Obligatory Correct
Question									Related/Incorrect
Recruit C's att'n									Unrelated
Prompt									Unintelligible
Time Delay									Imitative
Total Initiations									**Total Response**
Feedback									Initiations
Repeat									Verbal Request
Mirroring									Nonverbal Req.
Expansion									Question
Seeking Clarification									
Acknow/Praise									
Follow C's Lead									
Unintelligible									
Negative Feedback									
Total Feedback									**Total Initiations**
Unintelligible									Unintelligible
Comment									Comment
No Response									Nonverbal Behav.
									Loses Interest
Total Parent									**Total Child**

Interactive Language Scoresheet

Child's Name: Date:

Initiations																		Responses
Comment																		
Instruction																		Obligatory Correct
Command																		Imitative
																		Unrelated
Time Delay																		Related/Incorrect
Attending Cue																		Unintelligible
																		No Response
Prompt																		
Expansion																		
Follow C's lead																		
Recruit C's att'n																		
Off Topic																		
Feedback																		Initiations
Repeat																		Comment
Mirroring																		Unintelligible
Seek Clarification																		Verbal Requests
Acknow/Praise																		Nonverbal Req.
Negative Feedback																		Nonverbal Behav.
Other																		
																		Question
Miscellaneous																		No Time
No Time to Respond																		Loses Interest
No Response																		
Appro. No Response																		

Interactive Language Code:
(adapted from Hemmeter and Kaiser:
Combined Code Milieu and Responsive -Interactive Language Teaching)

Adult Behaviors
Initiations

Instruction
A request by the adult for the child to perform a nonverbal behavior.

Question
-A verbal prompt from the adult that requires a verbal response from the child.

Prompt
The adult physically cues or prompts the child.
-The adult points, directs, or moves towards a particular object of interest.
-The adult may use gestures in order to encourage the child to perform some operation or task.
-The adult physically assists the child in performing some operation.

Recruiting child's attention

Recruiting child's attention is coded when the adult makes an effort to gain the child's attention
-This is coded only when the child is not on task or taking part in the interaction.

Feedback

Repeat
-adult responds to child 's utterances by repeating what the child says or something close to what the child says.

Mirroring
When the adult imitates a nonverbal action , gesture, or expression imitated by the child. the nonverbal action may involve objects.

Expansion
-adult responds by repeating child's utterance and adds syntactic or semantic information to what the child said.
- if expansion follows a repeat, code only as an expansion,
for example, child: "Picture" Adult: " Picture. You color the pretty picture."

Clarification Seeking
-adult repeats the child's utterance to check to see if that is actually what the child said.
-this includes rising, questioning, intonation in the adult's utterance.
Clarification seeking also occurs when the adult says, "What?" in response to a child's utterance because the adult didn't hear or couldn't understand what the child said.

Acknowledgment /Praise
will follow a child's
-verbal response
-verbal or nonverbal request

1. The adult acknowledges the child's response e.g. "yes", "right" "uh-hum", "okay"
2. the adult praises the child's response. e.g. "very good"
3. The adult says nothing , but provides materials or assistance following a child's request.
4. The child requests for attention and the adult responds by looking.

Followed child's lead

-Following the child's lead means that the adult noticed what the child was interested in and the subsequent adult behavior was related to the child's focus of interest.
-It is also recorded when a parent responds to a child's question.

Negative Feedback
-Negative feedback is coded when the adult's response indicates that the verbal response or lack of verbal response by the child was wrong or inappropriate. Content and intonation should be used to determine if the adult's feedback is negative feedback. Negative feedback does not specify the correct answer and it does not require a further response by the child.

Non-Descript (non-engaged) Behavior

Comment

Any adult statement that does not require the child to respond, and is not in response to the child.

Code a comment:

-when the adult verbally describes the child's actions, thought or feelings.
-when the adult talks about herself, what she is doing thinking of feeling.
-when the adult talks about an event that is happening at the time (in the classroom or elsewhere), will happen in the future or has happened in the past.

No response

No response is coded following a request /command by the child or adult when the adult has time to respond (at least three seconds) but does not respond.

Unintelligible

-Any verbal behavior of the adult that is unintelligible.

CHILD BEHAVIORS

Responses

Obligatory Correct Response
A child response that follows a behavior by the adult and is a correct response; both appropriate and accurate.

Unrelated Response
- The content of the child's response is totally unrelated to the content of the preceding adult behavior. Unrelated response is coded when the child refuses to respond to an adult behavior.

A: What shape is this?
C: Me big.

A: What color is this?
C: I don't know.

Related but Incorrect
- The content of the child's response is semantically related to the preceding behavior by the adult but the response is not correct.
A: What shape is this? (holds up circle)
C: Square

Unintelligible Response
The child's response is audible but cannot be understood by the coder.

Imitative Response
The child's response to adult initiations or comments is purely imitative.
-code as obligatory Correct if following a question or an instruction.
A: Say circle.
C: Circle

Initiations

Unintelligible Initiation

Unintelligible initiation is coded when child's initiated utterance is audible but can not be understood by the adult. However, if the adult responds to the initiation code according to the inferred child initiation type.

Verbal Requests

An intelligible utterance produced by the child that has the apparent intention of getting the adult to provide assistance ,materials or attention or to stop engaging in some behavior.
-Successive requests for the same thing with no time between, then code as one request.

Nonverbal Requests

Nonverbal behavior and nonverbal behavior accompanied by a unintelligible request that has the apparent intention of getting the adult to provide assistance, materials, or attention or to stop engaging in some behavior.

Question

A child initiation that asks a why- or y/n question. (Questioning or declarative form with questioning intonation).

Non-descript (non-engaged) Behavior

Comment

An intelligible utterance, produced by the child that does not immediately follow a model, mand, or time delay. Comments may include topic related statements and non-topic related statement. Comments do not include verbal requests for materials, assistance, or attention as defined for verbal request. Any child statement that does not require the adult to respond, and is not in response to the adult.

-When child makes two or more comments in a row code separately?

Nonverbal Behavior

Code as nonverbal behavior any nonverbal child behavior that is responded to by the adult in a nondescript manner.

Loses Interest

Code Loses Interest

(1) When the child physically turn away from the topic material or the adult and chooses another focus of interest;

(2) focuses on a new topic material or searches for something else to play with;

(3) appears frustrated with throws, hits, or kicks a material inappropriately .

Do not code lose interest when the child looks away temporarily or looks away but still responds.

Reliability Assessments of the Interactive Language Assessment Device

Pre-Coding Assessments

Date	Reliability	Number of 30sec. Segments
Nov 29th, 1995	72%	1
Dec 1st, 1995	88.6%	3

Ongoing Assessment of Reliability

Date	Reliability	Number of 30sec. Segments
Dec 12th, 1995	81.6%	5
Dec 20th, 1995	73.8%	2
Dec 22nd, 1995	86.1%	2
Jan 4th, 1996	90%	2